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INTRACLASS GROUPING IN THE ELEMENTARY SCHOOL

By Mary Clare Petty

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By Mary Clare Petty

BUREAU OF LABORATORY SCHOOLS
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The benefits of educational and useful knowledge, generally diffused through a community, are essential to the preservation of a free government.

SAM HOUSTON

Cultivated mind is the guardian genius of Democracy, and while guided and controlled by virtue, the noblest attribute of man. It is the only dictator that freemen acknowledge, and the only security which freemen desire.

MIRABEAU B. LAMAR

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Preface

The Casis School is an Austin public elementary school enrolling approximately 700 children in kindergarten and grades one through six. Like other Austin public schools, the children who attend Casis come from a designated attendance area surrounding the location of the school at 2710 Exposition Boulevard. One wing of the Casis school provides modern facilities for special education of exceptional children; some of the latter children are transported to Casis by bus from all parts of Austin.

In 1946 the Board of Trustees of the Austin Independent School District and the Board of Regents of The University of Texas entered into an agreement establishing a co-operative research and demonstration project in elementary education. As a part of this agreement the Wooldridge School, one of the oldest elementary schools in Austin and located near The University of Texas campus, was designated as a special center for research and demonstration in elementary education.[1] This was an interim arrangement until a modern school plant could be developed. In January, 1951, the Casis School began operating and replaced the Wooldridge School as the special center for research and demonstration.[2]

Periodically, as funds are available, The University of Texas publishes bulletins describing practices in the school or research studies completed. The first such publication was prepared by the faculty of the school (then the Wooldridge School); it described the school's practices in grouping of pupils, marking, and reporting to parents.[3] The present bulletin reports a research study completed by Miss Mary Clare Petty as a doctoral dissertation. The completed dissertation was too voluminous for publication, so Miss Petty was requested to abridge

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[1] Henry J. Otto and J. W. Edgar, "Demonstration Center for Elementary Education." *Nation's Schools,* 45, No. 6, June 1950, 39–43.

[2] Henry J. Otto and others, "Teaching Handicapped Children." *Nation's Schools,* 50, No. 1, July 1952, 38–43.

[3] *Grouping, Marketing and Reporting to Parents.* The University of Texas Publication No. 5003, February, 1950. Austin, Texas: The University of Texas, Publications Office.

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CHAPTER I

General Plan of the Study

Every school in America today has some plan for grouping children for instructional purposes. Children are grouped for instructional purposes because there are obviously more pupils than teachers and because some of the objectives of education in a democracy can be attained and some of the needs of children can be met only in a group situation.

The plans for grouping children vary greatly, but they all propose to bring together children who are sufficiently alike to profit from mutual experiences. The objective of grouping is a degree of homogeneity which makes possible profitable group experiences for children and efficiency in instruction.

Otto has introduced very helpful terminology in describing the composite picture of the number, size, and types of children's' groups that are found in a given school as "the structural framework of what may be called the organization for group guidance of children."[1]

After this framework for group guidance of children is set up within the school, there is still the problem of heterogeneity within the different classrooms, for no plan of grouping children brings about complete homogeneity. Within any classroom there is a wide range of individual differences in abilities, achievements, and needs. In order to care for these individual differences and provide worthwhile educational experiences for children, it has become common practice to group children within the classroom for instructional purposes. It is with this practice of intraclass grouping that the present study is concerned.

STATEMENT OF THE PROBLEM

Adapting the terminology used by Otto,[2] this study may be described as a study of the structural framework of the intraclass organization for group guidance of children in elementary school classes. Three aspects of the problem are considered: (1) the relationship of the structure of the entire class to desirable practices in grouping children within the classroom, (2) the organization and guidance of intraclass groups, and

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[1] Henry J. Otto, *Elementary School Organization and Administration.* New York: D. Appleton-Century Company, Second Edition, 1944, p. 158.

[2] *Ibid.,* p. 158.

(3) the role of instructional materials and equipment. Throughout the study, special emphasis is placed upon the implications for guidance of children's learnings in the areas of arithmetic, reading, and social studies.

Since there has been little previous research focused specifically upon this problem, the present study endeavors to be exploratory in nature. It is not assumed that final answers will be derived. It is the exploratory nature of the study that prompted an extensive review of pertinent literature. In fact, the review of the literature constitutes a major portion of the study. The study thus falls into two parts. Part I is a review of the literature, and Part II is an analysis of intraclass grouping practices in selected elementary school classes.

Description of the Study

The first part of the present study is a careful review of recent professional literature and has as its two-fold purpose the determination of present philosophy and practices related to intraclass grouping of children and the development of an adequate theoretical background for the original research. Chapters II and III summarize the literature which deals with the problem in a general way. Chapter IV is a digest of the literature which deals specifically with the problem in its relation to teaching arithmetic, reading, and social studies.

The second part is an intensive study of actual practices in grouping children in selected classrooms. It utilizes four techniques: (1) study of available cumulative records, (2) interviews with teachers, (3) observations in the classrooms, and (4) sociometric tests.

Special attention is focused upon the objective school records which furnish information about the chronological ages of children, their progress in school, and their ability and achievement. The school records for 192 children in six classrooms were carefully studied.

An analysis is made of the information given by six classroom teachers during nineteen interviews which consumed approximately twenty-five hours. The interviews varied in length from thirty minutes to four hours. Each teacher was interviewed at least three times and gave a minimum of three hours to the conferences.

Twelve full-day observations in six different classrooms are analyzed to clarify practices in intraclass grouping in these classrooms.

The results of sociometric tests given 126 children in four different third- and fifth-grade classrooms are studied for implications for intraclass grouping.

In the presentation of all data, three aspects of intraclass grouping are considered: (1) the relationship of the structure of these classes to practices in grouping, (2) techniques used in working with the groups, and (3) the role of classroom facilities, equipment, and instructional materials in group work. Each of the three problems is studied in its relation to the teaching of arithmetic, reading, and social studies.

Part One

Review of Literature

CHAPTER II

Grouping Children for Instruction

The importance of grouping children for instructional purposes is generally recognized. Professional literature is rich in discussions which clarify the purposes of grouping and the problems involved in grouping children for instruction. Such professional literature is reviewed in this chapter.*

PURPOSES OF GROUPING

It is impossible to separate discussions of the purposes of interclass and intraclass grouping of children, for the two types of grouping are closely related and some professional literature fails to make a clear distinction between them.

McSwain analyzed the desired outcomes of grouping and generalized that grouping was a democratic instructional procedure designed to adapt the curriculum and learning environment to the abilities and needs of individual pupils and to provide appropriate means for fostering their continuous development.[3] This statement of the purposes of grouping is in harmony with most current discussions of the subject.

The special significance of grouping in a democracy is frequently recognized. Baxter and Cassidy pointed out that an individual must have an opportunity to serve others if he is to be stimulated to fuller and more magnanimous living and that co-operative behavior creates the climate of democratic effort and accomplishment.[4] The same authors held that group experiences must never be considered as ends in themselves, for the end in a democracy is always the fullest development of individuals in relation to others.[5]

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* Chapters II, III, and IV present a condensation of the more detailed review of literature in the following original account of this study which is available through interlibrary loan: Mary Clare Petty, *Intraclass Grouping in the Elementary School.* Unpublished doctoral thesis, The University of Texas, 1952.

[3] E. T. McSwain, "Intermediate School Grouping," *Portfolio for Intermediate Teachers,* Leaflet No. 5. Washington: The Association for Childhood Education, 1946, n.p.n.

[4] Bernice Baxter and Rosalind Cassidy, *Group Experience, The Democratic Way.* New York: Harper and Brothers Publishers, 1943, p. 18.

[5] *Ibid.,* p. 153.

The responsibility of the elementary school for guiding children in increasingly more competent membership in ever-enlarging groups has been well stated in *Education for All American Children.*[6] In the same publication, the statement was made that mass management of groups has gradually given away to practices that help pupils learn the ways of democratic living.[7]

Hildreth stated that skill in group living is not learned by chance but is definitely planned for in the elementary school and that group activities help children learn the value of orderly procedure, taking turns, working with a leader, and contributing a share to the common cause.[8]

Jenkins and associates pointed out the contribution to good mental health made by successful achievement in group activity and co-operative effort.[9]

Grouping has been recommended by Otto as a technique for providing for the range of individual differences found in classrooms on all grade levels in the elementary school.[10]

Olson stated that the fundamental hypothesis that children learn what they experience has been responsible for some of the current practices in modern schools, and the tendency of the modern school to keep individual, small group, and total class activity in good balance was cited as an example of current practice growing out of this fundamental hypothesis.[11]

In a discussion of grouping practices, Mehl, Mills, and Douglass gave five advantages of group instruction: grouping (1) provides better for some very important educational objectives, (2) makes possible some activities not possible under the individual plan, (3) stimulates effort through the discovery of problems and the interest developed in group discussions, (4) is valuable because it gives the slow an

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[6] Educational Policies Commission, *Education for All American Children.* Washington: The National Education Association of the United States and the American Association of School Administrators, 1948, p. 147.

[7] *Ibid.*, p. 130.

[8] Gertrude Hildreth, *Child Growth Through Education.* New York: The Ronald Press Company, 1948, pp. 286–288.

[9] Gladys Gardner Jenkins, Helen Shacter, and William W. Bauer, *These Are Your Children.* Chicago: Scott, Foresman and Company, 1949, p. 146.

[10] Henry J. Otto, *Principles of Elementary Education.* New York: Rienhart and Company, Inc., 1949, p. 315.

[11] Willard C. Olson, "Child Needs and the Curriculum," *Educational Leadership,* VI (January, 1949), 198.

opportunity to learn from others, and (5) makes unnecessary duplicate explanations.[12]

Hilgard and Russell presented an excellent discussion of grouping.[13] These authors stated that grouping practices have been influenced by knowledge of individual differences and more extensive use of standardized tests and that newer practices, growing out of psychological and sociometric studies, recognize the importance of interpersonal relations and group activities. According to these writers, grouping makes it possible for the teacher to adapt methods and materials more closely to the level most appropriate for the children and affords children an opportunity to work in small groups where friendships and other status-giving relationships are most likely to develop.

Types of Groupings

The term "group" can be used in a number of ways. Confusion can result from using the term to convey different meanings. When the term is used, its meaning should be clearly understood.

Coxe explained that the term "group" may be used to denote a classification or aggregation of individuals or may be used in a sociological sense.[14] This writer contended that growth of personality and character depends largely upon the individual's place in sociological groups and that optimum development of children will be assured only as teachers recognize the sociological characteristics of groups.[15]

Groups can be classified upon the basis of the portion of the school population involved. Hildreth stated that the modern school provides for three kinds of group activities: activities involving the entire school population as a group, large group activities that include one entire class or cut across several classes, and small group projects within a class.[16]

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[12] Marie A. Mehl, Hubert H. Mills, and Harl R. Douglass, *Teaching in Elementary School.* New York: The Ronald Press Company, 1950, p. 387.

[13] Ernest R. Hilgard and David H. Russell, "Motivation in School Learning," *Learning and Instruction,* The Forty-ninth Yearbook of the National Society for the Study of Education, Part 1. Chicago: The University of Chicago Press, 1950, pp. 59–60.

[14] Warren W. Coxe, "Summary and Interpretations," *The Grouping of Pupils,* The Thirty-fifth Yearbook of the Society for the Study of Education, Part 1. Bloomington, Illinois: The Public School Publishing Company, 1936, p. 307.

[15] *Ibid.,* p. 309.

[16] Hildreth, *op. cit.,* p. 287.

The purposes for which groups are formed furnish another basis for classification. McSwain used such a basis for a classification of groups and listed the following: interclass committees or councils, activity groups, pupil instructional service groups, special interest grouping, and children's own groupings.[17]

Baxter and Bradley gave a dual classification of intraclass groups based on fundamental purposes for which the groups are organized: one type which has as its purpose the teaching of subject skills on the level of the child's needs and the other which grows out of an awareness of the need of children in a democracy for actual practice in living and working together efficiently and happily.[18] Although this classification may appear to oversimplify the problem and to suggest a dichotomy which does not actually exist, it serves well to call attention to the fact that teachers may have different primary purposes as they work with small groups.

Thelen and Tyler contributed to the understanding of the problem by presenting an excellent discussion of group problems which calls attention to the need for a comprehensive methodology to guide the teacher dealing with problems of group process and problems of school achievement.[19] These writers pointed out that such a methodology must be based upon an analysis of the interrelationships between the two types of problems and elaborated upon some of these relationships. The following points are included in this discussion: (1) Problems of group process are usually at a subconscious level of awareness; there is feeling about such problems without conscious recognition. (2) Problems of school achievement are focused on communicable educational objectives such as learning a new skill or planning an activity. (3) Both types of problems are continuously present and necessary to progress, for the problems of school achievement give concrete material on which to concentrate intelligent problem-solving methods and through which specific problems of process can be diagnosed, and the need to resolve conflict in feeling furnishes a major source of motivation for learning. (4) Groups automatically concentrate major effort on problems of group

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[17] McSwain, *op. cit.*, n. p. n.

[18] Bernice Baxter and Anne M. Bradley, *An Overview of Elementary Education.* Boston: D. C. Heath and Company, 1945, p. 17.

[19] Herbert A. Thelen and Ralph W. Tyler, "Implications for Improving Instruction in the High School," *Learning and Instruction,* The Forty-ninth Yearbook of the National Society for the Study of Education, Part 1. Chicago: The University of Chicago Press, 1950, pp. 311–320.

process when feelings mount in intensity above the group level of tolerance. (5) Problems of group process tend to build up over a longer period of time than do problems of school achievement because they are primarily emotional rather than intellectual, and the solution of the two types of problems may not come about at the same time. (6) Raising problems of group process to the conscious level of shared understanding may be facilitated by informal discussion groups and cliques.

Bradley and Cassidy called attention to two types of groups, the spontaneous which emerges in response to an immediate and often dramatic necessity for action and the guided which emerges through the carefully planned organization of an authorized leader.[20]

Promotion and Classification Policies as Related to Intraclass Grouping

The problems of interclass and intraclass grouping are inseparably linked together. The classification and promotion policies of a school are important factors in determining the structure of the classroom groups within which intraclass groups are organized and should be given consideration in any study of intraclass grouping.

The problem of forming classroom groups is by no means a new one. Many plans for grouping children have been used. Cook summarized plans used since 1837 and concluded that none had significant enough merit to warrant its wide adoption and that the significant problem is that of adjusting instruction to the variability within instructional groups.[21] The importance of classification policies is generally recognized. For example the statement was made in *Organizing the Elementary School for Living and Learning* that no other aspect of organization has as great influence upon the lives of children and teachers as does the manner in which children are placed in class groups.[22]

Although recognizing the importance of promotion and grouping practices, it is well to keep in mind the fact that such practices are never ends in themselves and are limited in potentialities. For example,

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[20] Baxter and Cassidy, *op. cit.*, p. 21.

[21] Walter W. Cook, *Grouping and Promotion in the Elementary Schools* (Series on Individualization of Instruction, College of Education, University of Minnesota). Minneapolis: The University of Minnesota Press, 1941: pp. 56–57.

[22] *Organizing the Elementary School for Living and Learning,* 1947 Yearbook of the Association for Supervision and Curriculum Development of the National Education Association. Washington: The Association, 1947, p. 39.

Kubik and Pease expressed the opinion that no administrative devices can bring about true pupil-centeredness when a school is operated with subject matter as its primary basis of organization.[23]

If promotion and classification policies are to be functional, they must be in perfect harmony with the objectives sought. Caswell expressed this fact by stating that the organization of the school should make provision for grouping of pupils in relation to the educational objectives to be achieved.[24]

In a very thorough treatment of the problem of grouping, Otto emphasized the relationship between practices and philosophy and the fact that it is yet to be determined what plans of grouping result in the highest degree of self-realization for individuals in a democratic society.[25] He stated that a clear conception of the function of grouping is essential if policies are to be constructively evaluated and listed the following purposes of grouping: (1) to allocate pupils to conveniently sized groups so the work of the school can proceed in an orderly fashion, (2) to facilitate the execution of the educational policy, and (3) to place children in a school environment which provides the greatest stimulation and maximum opportunities for growth.[26]

Homogeneous or ability grouping has very significant implications for intraclass grouping. There is no complete agreement as to the merits of such practices. However there is some strong opposition to it in current literature. Caswell expressed an opinion in harmony with much of the professional literature on the subject.[27] According to this writer the position one takes on ability grouping is primarily dependent upon his basic conceptions of the nature of the individual and of the purposes of education. In his opinion, one does not accept ability grouping as desirable if he considers the democratic process one in which real respect for the personality of every person is basic.

A philosophy of grouping is closely related to attitudes toward in-

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[23] Edmund J. Kubik and J. E. Pease, "A Promotion and Grouping Policy for the Elementary School," *American School Board Journal,* CXVI (February, 1948), 37.

[24] Hollis L. Caswell, *Education in the Elementary School.* New York: American Book Company, 1937, p. 227.

[25] Henry J. Otto, *Elementary School Organization and Administration.* New York: D. Appleton-Century Company, Second Edition, 1944, p. 162.

[26] *Ibid.,* p. 159.

[27] Caswell, *op. cit.,* pp. 236–237.

dividual differences. In an excellent discussion of individual differences, Caswell pointed out three facts of primary importance: (1) individual differences are normal, inevitable, and present in all characteristics and abilities; (2) differences are not unmitigated evils, but much of the richness of living and many important achievements of men arise from the differences in capacity, ability, and outlook; and (3) adequate education tends to increase rather than to decrease differences.[28]

Regardless of the plan used for classifying pupils, true homogeneous grouping is an impossibility. After making an analysis of the limitations of homogeneous grouping, Cook concluded that probably the best bases for grouping are chronological age, physical development, and social development.[29]

Macomber criticized segregating children into ability groups on the basis of general intelligence and contended that any segregation should be on the basis of ability in each area of learning and not on any general basis.[30] Several co-existing intraclass groups would make it possible for a child to be in the average group for some activities and in more or less advanced groups for other activities.

Hamalainen also favored heterogeneous grouping and reported its successful use in the school of which he was principal.[31]

Beaumont and Macomber expressed the belief that ability grouping was being discontinued and gave specific reasons for their opinion.[32]

As early as 1934, Brueckner expressed the opinion that excessive failures were being eliminated and that the tendency appeared to be to promote on an age basis so that pupils were in relatively homogeneous groups according to age and social group, and he also directed attention to the need for research to determine the effects of such practices.[33]

Chase, in reporting on elementary education in the eastern states, stated that the continuous progress plan as contrasted with the annual

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[28] *Ibid.*, pp. 100–103.

[29] Cook, *op. cit.*, pp. 57–58.

[30] Freeman Glenn Macomber, *Guiding Child Development in the Elementary School.* New York: American Book Company, 1941, pp. 305–306.

[31] Arthur E. Hamalainen, "Method of Grouping Pupils Should Provide Normal Social Situations," *Nation's Schools,* XLV (June, 1950), 34–35.

[32] Henry Beaumont and Freeman Glenn Macomber, *Psychological Factors in Education.* New York: McGraw-Hill Book Company, 1949, pp. 207–208.

[33] Leo J. Brueckner, "The Cumulative Effects of the Policy of Non-Failing," *Journal of Educational Research,* XXVIII (December, 1934), 289–290.

promotion plan had been adopted in various school systems throughout the country or was being tried on an experimental basis.[34]

Elsbree called attention to the high number of pupil retentions resulting from undesirable grouping and promotion practices and to intraclass grouping as one technique for meeting the problem.[35]

Perlman described a plan of continuous progress and concluded rather optimistically that a child is no longer considered a pupil in the fifth or sixth grade but is looked upon as a pupil in his fifth or sixth year of school.[36]

Smith and Dolio stated that the bases used for grouping reflect underlying educational theory and that newer developments in grouping were resulting from psychological and sociometric research.[37]

Social criteria are being given serious consideration as children are grouped in schools today, and the importance of peer status is being recognized. Otto listed physical factors, social factors, and intellectual factors as the groups of factors which enable children to achieve status with peers.[38]

Olson expressed the opinion that no method of grouping yet devised has any special advantage and even suggested the use of children's own choices of classroom groups as a means for grouping on an experimental basis.[39]

Certainly faculties should evaluate very carefully their grouping policies. Ellerbrook and others presented the thesis that all teachers in a system should subscribe to the same general theory in regard to promotion policies, pointing out the possibility, for example, that a second-grade teacher who believes in the grade-standard theory might not accept the responsibility of working with the less mature members

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[34] W. Linwood Chase, "The Nation Reports," *The National Elementary Principal,* XXVI (December, 1946), 24.

[35] Willard S. Elsbree, "Promotion and Failure Policies in the Graded School," *The National Elementary Principal,* XXVI (December, 1946), 8–9.

[36] Milton B. Perlman, "Education Is Marching On: Thoughts on Pupil Progress," *Elementary School Journal,* XLIX (October, 1948), 75.

[37] B. Othanel Smith and A. J. Dolio, "Recent Developments in Grouping—A Minimum Bibliography," *Educational Leadership,* IV (March, 1947), 403–404.

[38] Henry J. Otto, "The Use of Social Criteria in Grouping Children at School," *Childhood Education,* XXII (March, 1946), 328.

[39] Willard C. Olson, *Child Development.* Boston: D. C. Heath and Company, 1949, p. 360.

of a class promoted by a first-grade teacher who believes in a plan of continuous promotion.[40]

Descriptions of specific plans for grouping children within a school serve to give information about groups with which teachers are likely to work as they attempt to set up intraclass groups. Lane described in detail a plan for setting up class groups primarily based upon chronological age.[41]

Caswell described what he considered the best basic unit of organization and gave a generalized picture of the classroom groups found in many modern schools.[42] He recommended the self-contained classroom in which a group of children of approximately the same social maturity are grouped together under the extended and continuous guidance of one teacher.

Polkinghorne described a plan for combining age groups on the primary level used at the University of Chicago.[43] The experiences with these combined groups led to a study to discover if other schools were experimenting with similar groupings. The results of the study showed that 225 schools responded to a questionnaire and that 39.1 per cent of them had some combined age or grade groups. This study showed that the most usual combination was first and second grades and that most schools combined groups for administrative reasons.[44]

The staff of Wooldridge School, Austin, Texas, evolved a detailed plan for grouping children which illustrates very well current philosophy in action.[45] Criteria which gave consideration to physical development, wholesome personality development, mental maturity, and academic maturity were employed, and a framework of continuous but flexible groupings for children's progress through the grades was provided.

The nature of the structure of classroom groups resulting from present

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[40] L. W. Ellerbrook, Esther Boehlje, and Margaret Mercille, "What Are the Requirements for Promotion from First Grade?" *The National Elementary Principal,* XXVI (December, 1946), 30.

[41] Robert Hill Lane, *The Teacher in the Modern Elementary School.* Boston: Houghton Mifflin Company, 1941, pp. 82–83.

[42] Caswell, *op. cit.,* p. 240.

[43] Ada R. Polkinghorne, "Grouping Children in the Primary Grades," *The Elementary School Journal,* L (May, 1950), 502.

[44] *Ibid.,* pp. 503–505.

[45] The Staff of the Wooldridge School, Austin, Texas, *Grouping, Marking and Reporting to Parents,* University of Texas Publication No. 5003. Austin, Texas: The University of Texas Press, February 1, 1950, pp. 15–33.

promotion and classification practices has received little consideration. Research on this problem is badly needed.

Coker made a study of the available factual data about all pupils in an elementary school.[46] The study presented clearly the complexity of the structure of typical class groups. It is within such complex structures that teachers have to set up intraclass groups.

Edmiston and Benfer reported an experimental study of the relation between achievement and ranges of ability within groups.[47] The subjects were 426 pupils in the fifth and sixth grades in a school previously using ability grouping based on intelligence test scores. Such grouping was continued, but on each grade level groups with wider variations in I.Q.'s were established. Under the experimental conditions described, better reading achievement in groups with average range of I.Q.'s of forty points was indicated than in groups with average range of I.Q.'s of thirty points.[48]

Lane stated that traditional methods of classifying pupils appear at best to be mechanical devices intended to aid and comfort teachers and administrators but that grouping on the basis of social maturity is designed to comfort the children themselves.[49] This statement might well be used to summarize present philosophy on the subject of grouping children in the elementary school.

SUMMARY

All schools group children for instructional purposes. Plans for bringing children together into class units vary greatly, but all such plans have as their objective a degree of homogeneity which makes possible profitable group experiences for children and which results in efficient instruction.

Present practices in grouping children reflect the acceptance of broad objectives of education and a commitment to a democratic philosophy. The most thoughtful writers on the subject have pointed out the need for research to determine what plan of grouping does result in the

[46] Mary Ausite Coker, *Analysis of Factors Pertaining to Elementary School Class Groups in Overton, Texas.* Unpublished master's thesis, The University of Texas, 1946.

[47] R. W. Edmiston and J. G. Benfer, "The Relationship Between Group Achievement and Range of Abilities within the Groups," *Journal of Educational Research,* XLII (March, 1949), 547–548.

[48] *Ibid.*, p. 548.

[49] Lane, *op. cit.*, p. 89.

maximum development of individuals in a democracy. However, the importance of chronological age, physical development, and social development as bases for grouping children in the elementary school is generally recognized, and the tendency in practice is definitely away from achievement grouping to flexible plans for grouping children which give consideration to the total development of children.

Classification and promotion practices have very important implications for intraclass grouping, for they determine to a large extent the structure of the class groups within which smaller groups are organized. No plan for classifying children eliminates the problem of heterogeneity within class groups. Certainly prevailing practices are resulting in class groups with very wide ranges in achievement and ability, and intraclass grouping is one technique which is frequently used in the elementary school to care for these individual differences.

Plans for intraclass grouping represent attempts to organize classes in such a manner that maximum social and personal development for all children in the classes can be realized. Although such grouping does bring together for certain activities small groups of children who are sufficiently homogeneous to profit from mutual experiences, the problem of heterogeneity within the small groups remains.

Professional literature on the subject of the organization of intraclass groups does more to clarify the problem than to give specific help to classroom teachers who are attempting to work out techniques for organizing such groups. There is an increasing recognition of the importance of the social dynamics within a class, and attention is being focussed on problems of both group achievement and group process as they relate to intraclass grouping.

CHAPTER III

Working with Groups in the Classroom

This chapter deals with the guidance of intraclass groups. The following factors are given consideration: (1) the role of the teacher, (2) the scope of the curriculum, (3) the role of materials, (4) factors determining the success of group work, (5) committee work as a form of group work, (6) appropriate group experiences, (7) the contributions of sociometry, (8) the evaluation of group work, and (9) meeting individual needs.

THE ROLE OF THE TEACHER

It is absolutely necessary for the teacher to understand her* role if group work in the classroom is to be successful.

Yoakam and Simpson described the teacher in the modern school as a director of and participator in activities who abandons time-honored dictatorship for responsibility and leadership as a participating member of a democratic group.[50]

Harding wrote a parallel description of the role of the teacher, placing special emphasis upon the importance of the teacher's identifying appropriate problems which are challenging and vital to children.[51]

Trow and co-authors stated that the potentialities of the class as a medium for instruction in social learning become clearer to teachers as they move away from the tutorial conception of the classroom.[52] According to these writers, the teacher who utilizes the classroom situation fully for instruction in social living assumes three roles: (1) the instructional role, (2) the role of the democratic strategist, and (3) the role of the therapist. In the instructional role, the teacher is concerned

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* Although many men are teaching in the elementary school and one of the co-operating teachers in the Casis Elementary School was a man, feminine pronouns are used in this report in order to avoid unnecessary repetition.

[50] Gerald A. Yoakam and Robert G. Simpson, *Modern Methods and Techniques of Teaching*. New York: The Macmillan Company, 1948, pp. 215–216.

[51] L. W. Harding, "Building Values in a Problem-Centered Curriculum," *Progressive Education*, XXVI (October, 1948), 19.

[52] William Clark Trow, Alvin E. Zander, and William C. Morse, "Psychology of Group Behavior," *Journal of Educational Psychology*, XLI (October, 1950), 324.

with information; in the role of democratic strategist, he is concerned with guiding the formation of groups; and in the role of therapist, he is concerned with the development of the pupils in the class.[53]

The teacher has a special role in the making of decisions. It has been recommended that the teacher neither assume rsponsibility for making all major decisions nor leave such responsibility to the class but that she become a real member of the group and help make decisions in a democratic manner.[54]

The following list of services performed by the teacher as she guides group participation has been compiled: (1) helping small groups satisfy their needs by a process which will reveal larger needs involving more children, (2) helping children learn to do situational thinking, (3) helping small groups see their courses of action in relation to their needs and the needs of the class, (4) accepting the worth of every child for what he is, as he is, and working with him to develop his potentialities, (5) knowing every child as an individual personality, (6) helping each child build a unity within himself, (7) helping children locate and use all pertinent resources, and (8) developing genuinely educational experiences.[55]

As the teacher works with groups she must not fail to accept her responsibility for meeting the needs of individuals in the groups. The story of Margo's role in group activities illustrates well the way the teacher must constantly be alert to individual needs.[56] After observing Margo picking up blocks, cleaning up the table where children had worked with clay, and replacing materials, the teacher realized that Margo had a very limited role in a relatively aggressive group and placed her in a group where it was possible for her to have a variety of experiences and opportunities for many kinds of responses. With a less alert teacher Margo would have realized less personal growth.

The Scope of the Curriculum and Grouping Practices

It is surprising that more attention has not been given to the scope

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[53] *Ibid.*, p. 331.

[54] *Toward Better Teaching, A Report of Current Practices*, 1949 Yearbook of the Association for Supervision and Curriculum Development of the National Education Association. Washington: The Association, 1949, p. 64.

[55] "Meeting the Needs of the Whole Child Through Group Participation," *Teachers College Record*, L (February, 1949), 298–300.

[56] *Knowing When Children Are Ready to Learn*, Second 1947 Membership Service Bulletin of the Association for Childhood Education. Washington: The Association, 1947, p. 23.

of the curriculum as a factor in determining grouping practices. McSwain expressed the opinion that the curriculum must be simplified and made more socially meaningful if methods of grouping are to be productive in meeting individual needs and urged that more emphasis be placed on activities that motivate growth in reflective observation, critical thinking, drawing conclusions from data, and appraising attitudes and work-study skills.[57]

Adequacy of Instructional Materials and Group Work

The possibilities for working constructively with small groups are definitely limited by the available materials. Although studies of the relation of adequacy of materials to group work are not available, writers recognize the importance of a rich environment. Caswell and Campbell presented a typical description of a desirable classroom environment which called attention to the variety and flexibility of materials which permit group projects to advance unhampered.[58]

Mursell also pointed out the stimulation to learning provided by a rich environment, especially the contributions made by resource materials and materials which make individual experimentation possible.[59]

Teachers should strive for the best possible utilization of all available facilities. It has been pointed out that such utilization of facilities is possible only when teachers plan together co-operatively, when teacher and pupils plan together, and when there is continuous criticism and change.[60]

In a discussion of the development of fundamental skills, Stratemeyer and others stressed the importance of relating materials to actual situations faced by children and the use of textbooks and workbooks as reference materials.[61]

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[57] E. T. McSwain, "Intermediate School Grouping," *Portfolio for Intermediate Teachers*, Leaflet No. 5. Washington: The Association for Childhood Education, 1946, n. p. n.

[58] Hollis L. Caswell and Doak S. Campbell, *Readings in Curriculum Development*. New York: American Book Company, 1937, p. 628.

[59] James L. Mursell, *Developmental Teaching*. New York: McGraw-Hill Book Company, Inc., 1949, pp. 116–117.

[60] *Organizing the Elementary School for Living and Learning*, 1947 Yearbook of the Association for Supervision and Curriculum Development of the National Education Association. Washington: The Association, 1947, p. 31.

[61] Florence B. Stratemeyer, L. Hamden Forkner, and Margaret G. McKim, *Developing a Curriculum for Modern Living*. New York: Bureau of Publications, Teachers College, Columbia University, 1947, p. 355.

Resourceful teachers have recognized the fact that centers of interest afford valuable experiences for children and stimulate informal and spontaneous group work. Jenkins recorded a full and helpful list of possible centers of interest.[62]

Factors Determining the Success of Group Work

A consideration of the factors determining the success of group work is important. Hughes wrote that successful group work (1) requires free interaction among members of the group, (2) must be concerned with problems of common concern, (3) requires the exercise of many talents and abilities, and (4) cannot be acquired without analysis and evaluation of the process.[63]

Guidance of group work may be considered a problem in social engineering. According to Thelen, the development of a curriculum for a school with its particular personnel and community setting is an engineering problem.[64] He discussed six interactions or processes which must go on in every group: (1) There must be adequate communication. (2) There must be an agreement concerning a value system. (3) There must be control on co-operative efforts, including implicit or explicit agreement concerning limitations to individual power potentials. (4) Individuals must produce changes in the situation to avoid frustrations. (5) Satisfactions must be distributed between group members. (6) The group must attain an equilibrium status to achieve solidarity.[65]

In a discussion of "Group Productivity," Thelen presented the following seven important factors determining the productivity of a group: (1) Although the informal structure may or may not continue, the working-group structure disintegrates in the absence of goal-direction. (2) The description of the goal should represent group concensus, not majority vote. (3) The level of aspiration should be selected realistically giving consideration to the expectancy of the group in its particular situation. (4) The level of aspiration must be continually evaluated and changed in response to the changing perception of the

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[62] Gladys Gardner Jenkins, Helen Shacter, and William W. Bauer, *These Are Your Children*. Chicago: Scott, Foresman and Company, 1949, pp. 146–148.

[63] Marie M. Hughes, "Training Pupils for Successful Group Living," *The Elementary School Journal,* L (April, 1950), 455–459.

[64] Herbert A. Thelen, "Engineering Research in Curriculum Building," *Journal of Educational Research,* XLI (April, 1948), 577.

[65] *Ibid.*, pp. 580-585.

realities in the situation. (5) The group should set the problem in a broad conceptual framework to assure continuity of action beyond the solution of a specific problem. (6) The relationship between group and individual action should make it possible for the individual to see his out-of-group action as the resumption of a task set in the group and interrupted by the ending of the preceding group meetings. (7) The solution of a problem must involve all the groups in the social system with overlapping potencies capable of producing conflicts detrimental to individual freedom of action in solving the problem.[66]

Hockett and Jacobsen stressed the importance of good class organization which is dependent upon the teacher's careful planning, intimate knowledge of pupils' needs and abilities, wide acquaintance with various available materials, resourcefulness, and ability to capitalize upon pupils' capacities and to enlist their co-operation.[67]

Boyer wrote that groups find their cohesiveness in a community of purpose and that co-operative activity of the highest type is possible only when a group recognizes clearly a common purpose.[68]

Jennings considered the constellation of attractions and rejections that make up the social relationships of the classroom a dominately decisive factor in the learning that takes place in school and called attention to the need for techniques for assessing group life which parallel techniques now available for studying individuals.[69]

The maturity of the group is another factor that must be taken into consideration if group work is to be successfully guided. In a discussion of group living, the statement was made that groups vary all the way from what may be termed group infancy to group senility in their capacity to work together.[70]

Another factor in the effectiveness with which a group works is the

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[66] *Ibid.*, pp. 589-593.

[67] John A. Hockett and E. W. Jacobsen, *Modern Practices in the Elementary School.* Boston: Ginn and Company, 1938, pp. 248–249.

[68] Philip A. Boyer, "The Administration of Learning Groups," *The Grouping of Pupils,* The Thirty-fifth Yearbook of the Society for the Study of Education, Part I. Bloomington, Illinois: The Public School Publishing Company, 1936, p. 192.

[69] Helen Hall Jennings in Association with the Staff of Intergroup Education in Cooperating Schools, *Sociometry in Group Relations, A Work Guide for Teachers,* Washington: American Council on Education, 1948, p. 1.

[70] Kenneth D. Benne, Ronald Lippitt, and Leland P. Bradford, "Toward Improved Skill in Group Living: A Discussion," *Educational Leadership,* V (February, 1948), 291–292.

concept of leadership in operation. The teacher who attempts to direct the formation and guidance of intraclass groups should strive to develop a clear understanding of democratic leadership. Miel stated that it is impossible to draw a sharp line between leaders and followers in a democratic group, for there are merely group members.[71]

In a discussion of democratic leadership and group processes, Anderson pointed out that: (1) leadership is not a prerogative of status or tenure, (2) roles of leadership and followship interchange as the group develops its plans, and (3) leadership in democratic groups fluctuates in terms of merit of contributions made.[72]

Caswell suggested that the focal point in group life should be large enterprises and that groups should be flexible, temporary, and related to particular activities—the normal expressions of plans of work developed with the children.[73]

Thelen developed the thesis that a group united in a common endeavor must have sufficient skills to practice and carry out the jobs required for achievement and sufficient social skills for the efforts of all individuals to be co-ordinated and complementary to one another.[74] Teachers must constantly keep in mind their responsibility for developing both types of skill if their guidance of group work is to be successful.

Thelen called attention to two significant approaches for increasing the educativeness of participation, (1) increasing the emotional involvment and tempo of thinking of students without increasing the possibility of self-directive activity and (2) increasing students' participation in self-directive activites.[75] The teacher should realize the educativeness of group work increases as more and more opportunities are given children to participate in self-directed activities.

The staff of Wooldridge School, Austin, Texas, listed several specific suggestions to serve as guides as teachers group children within the classroom: (1) The achievement of children should be determined through testing and observation. (2) Work habits, personality clashes,

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[71] Alice Miel, "We Grow as Responsible Group Members," *Childhood Education*, XXVII (April, 1951), 351.

[72] Walter A. Anderson, "Democratic Group Processes—Key to Improvement," *The School Executive*, LXX (April, 1951), 55.

[73] Hollis L. Caswell, *Education in the Elementary School*. New York: American Book Company, 1942, pp. 241–242.

[74] Herbert A. Thelen, "Group Dynamics in Instruction: Principle of Least Group Size," *The School Review*, LV (March, 1949), 141.

[75] *Ibid.*, p. 140.

and personality dependencies should receive careful consideration. (3) There is no way of stating definitely how many groups there should be. (4) Do not isolate one boy with a group of girls or vice versa. (5) All groups do not have to report each day upon group work done. (6) Giving groups names which indicate their achievement level is unsound psychologically. (7) Each group is a changing thing.[76]

Committee Work as a Form of Group Work

Committee work, as one type of group work, has been widely used by teachers and should receive special attention. In a discussion of the use of committees to meet individual needs and interests, Gwynn stated that such grouping is sound because most of the work in a real democracy is done in such a way and that it is advisable to place children in situations which are similar to those which will confront them in adult life.[77]

Otto presented a very thorough yet condensed discussion of the use of committees in the elementary school.[78] He called attention to the fact that some committees are associated with classroom routines and management and others are organized for participation in certain unit activities and make possible a diversity of learning activities that help to provide for individual differences.

Appropriate Group Experiences

In an excellent discussion of "Where to Find Group Experiences," Harris named four conditions that are characteristic of situations in which group experiences are utilized in teaching: (1) every effort is made to capitalize upon the social structure of the group, (2) there is a broad curriculum, (3) there is great concern for the individual, and (4) the broadest implications of child development are considered.[79]

In a discussion of "Group Problems and Techniques," the same writer classified teacher activities in guiding group work under six

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[76] The Staff of Wooldridge School, Austin, Texas, *Grouping, Marking and Reporting to Parents*, University of Texas Publication No. 5003. Austin, Texas: The University of Texas Press, February 1, 1950, pp. 34–36.

[77] J. Minor Gwynn, *Curriculum Principles and Social Trends*. New York: The Macmillan Company, 1950, p. 336.

[78] Henry J. Otto, *Principles of Elementary Education*. New York: Rinehart and Company, Inc., 1949, pp. 339–340.

[79] Fred E. Harris, "Techniques for Guiding Group Experiences in the Classroom," *Elementary School Journal*, XLIX (September, 1948), 32–33.

headings: (1) determining group needs, (2) guiding the assignment and acceptance of responsibilities, (4) guiding group activities, (5) guiding in the determination of group and individual benefits, and (6) assisting in evaluation activities.[80] Each classification of teacher activities implies a parallel classification of appropriate pupil activities.

As part of a discussion of activities in which it is possible for pupils to proceed in ways that give practice in democratic co-operation, Brueckner listed consideration of ways of meeting needs and solving problems; committee work related to the management of routines; committee work on problems growing out of regular class work; preparation of exhibits, displays, and group reports; preparation of dramatizations; and planning and participating in excursions, parties, and other group activities.[81]

Upon the basis of an extensive study of units that had actually been carried through to completion, Caswell and Campbell concluded that there was an increasing variability in the activities and interests that one may find in a modern classroom.[82]

Sociometry and Group Work

According to Smith and Dolio, educators are becoming more aware of the advantages to be gained from a determination of the social relationships present in classroom groups and are evidencing increasing interest in techniques for determining such relationships.[83] These authorities expressed the opinion that this increasing use of sociometry is a natural outgrowth of present educational psychology.[84]

According to Otto, it is as important in forming groups to know the psychological composition of the group and the interrelations of the individuals therein as it is to know the growth status and developmental picture for each child.[85]

In a discussion of this problem in the 1949 yearbook of the Association for Supervision and Curriculum Development, teachers have been

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[80] *Ibid.*, pp. 33–36.

[81] Leo J. Brueckner, "Learning the Meaning of Democracy through Participation, Observation, and Study," *The National Elementary Principal*, XXVII (June, 1948), 40.

[82] Caswell and Campbell, *op. cit.*, p. 629.

[83] B. Othanel Smith and A. J. Dolio, "Recent Developments in Grouping—A Minimum Bibliography," *Educational Leadership*, IV (March, 1947), 410.

[84] *Ibid.*, pp. 403–404.

[85] Henry J. Otto, *Elementary School Organization and Administration*. New York: D. Appleton-Century Company, Second Edition, 1944, pp. 171–172.

urged to make frequent provisions for varied composition of smaller working units within the classroom in order to assure individuals successful experiences in group participation, and the sociogram has been recommended as an aid to insight into the social needs of children.[86] In the 1950 yearbook of this Association, the sociometric test was described as a simple method for revealing actual natural groupings and for diagnosing personal association patterns.[87]

Attention has been directed to the fact that the sociogram gives a systematic picture of the social relationships within a group without giving any explanations for the existence of such relationships.[88]

Any plan of grouping holds implications for the mental health of children. According to a discussion in *Fostering Mental Health in Our Schools*, the sociometric approach to grouping is recommended to teachers because one way to help children overcome insecurity and to release leadership is to utilize the natural groupings of children.[89]

According to Olson, sociometric analysis attempts to find answers to questions which teachers raise in regard to the social relationships in their classrooms.[90]

Richardson gave a very good discussion of techniques for studying groups and warned that such devices have proved to be aids when accompanied by sensitized observation and have become obstacles when they have shortcut observation.[91]

The importance of the peer group in the life of a child has been recognized by educators. In a discussion of the nature and importance of peer groups, Bossard pointed out that the peer group is more than an association of equals whose concern is with each other, that it is also a grouping in which the adult is assigned the status of alien.[92] The

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[86] *Toward Better Teaching, A Report of Current Practices*, 1949 Yearbook of the Association for Supervision and Curriculum Development of the National Education Association. Washington: The Association, 1949, pp. 38–41.

[87] *Fostering Mental Health in Our Schools*, 1950 Yearbook of the Association for Supervision and Curriculum Development of the National Education Association. Washington: The Association, 1950, pp. 203–204.

[88] *Ibid.*, p. 213.

[89] *Ibid.*, p. 203.

[90] Willard C. Olson, *Child Development*. Boston: D. C. Heath and Company, 1949, p. 195.

[91] Sybil K. Richardson, "Techniques for Studying Groups of Children," *California Journal of Elementary Education*, XVII (November, 1948), 85–88.

[92] James H. S. Bossard, *The Sociology of Child Development*. New York: Harper and Brothers, 1948, pp. 493–494.

teacher should have a conception of this dual nature of the peer group as she attempts to work with intraclass groups.

According to Chapin and Conway, an understanding of the nature and significance of the group contributes materially to the fruitfulness of efforts to deal with problems of education.[93] Certainly such understanding is basic to successful guidance of intraclass groups.

Cunningham and associates maintained that a teacher who understands group dynamics can do much to bring about a desirable classroom atmosphere and thus influence the amount of achievement as well as the emotional adjustment of pupils.[94]

They present, as a tentative conclusion which should be more thoroughly investigated, the premise that patterns of adult control are frequently accompanied by sociograms which indicate patterns in which choices are centered in a few individuals.[95]

Glad presented an excellent discussion of the general manner in which teachers apply their understanding of social relationships within a group.[96] In this discussion, he pointed out that the teacher who understands social relationships will take into account not only the composition of the group for efficiency toward immediate purposes but also the personality effect of each child on all others.

Flotow evaluated the use of the sociometric test in the New Lenox (Illinois) Public Schools and concluded that the use of this test had given teachers and administrators a much clearer view of the entire problem of social relationships, had made teachers keenly aware of the direct relationships between his everyday teaching problems and the social adjustment of children, and had given accurate and vital information for pupil and parent conferences.[97]

Jennings made the following concrete suggestions for grouping children in the classroom upon the basis of sociometric information: (1)

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[93] F. Stuart Chapin and Margaret I. Conway, "The Social Group in Education," *The Grouping of Pupils*, The Thirty-fifth Yearbook of the Society for the Study of Education, Part 1. Bloomington, Illinois: The Public School Publishing Company, 1936, p. 58.

[94] Ruth Cunningham and Associates, *Group Behavior of Boys and Girls*. New York: Bureau of Publications, Teachers College, Columbia University, 1951, p. 5.

[95] *Ibid.*, p. 185.

[96] Donald D. Glad, "Grouping for Development," *Childhood Education*, XXV (April, 1949), 355.

[97] Ernest A. Flotow, "Charting Social Relationships of School Children," *Elementary School Journal*, XLVI (May, 1946), 503–504.

The size of the group should vary according to how easily students enter into interrelationships; groups should be small when interrelationships are difficult. (2) It is wise to include other students among the groups which have closed formations. (3) Each group should be a cosmopolitan mixture of such differences as sex, age levels, home backgrounds, and ability. (4) Whenever a mixed group of students is to work together for the first time, it is well to include more than one individual for each difference such as sex, age, and race. (5) Divide the unchosen students so that not more than two will be in each working group of six or more and give each the most advantageous interpersonal surroundings possible.[98]

The Evaluation of Group Work

With the present emphasis upon evaluation, it is surprising that professional literature carries so few specific suggestions that teachers can use in evaluating their guidance of small groups.

Burr, Harding, and Jacobs gave some major principles of group work which suggest parallel criteria for evaluating group work,[99] and Yoakam and Simpson presented a check list for evaluating socialized classroom activities.[100] A review of the available literature indicates that additional consideration should be given to this problem.

Intraclass Grouping as a Means for Meeting Individual Differences

Since intraclass grouping is primarily a technique for meeting individual needs and since all discussions of the subject make this factor clear, it is surprising that there are no satisfactory accounts of *how* teachers can utilize this technique to meet individual needs.

There is limited treatment of this problem as it is related specifically to instruction in arithmetic, reading and social studies. This literature is reported in the following chapter.

Summary

Intraclass grouping is a technique frequently used in the elementary school to meet the problems arising from the fact of individual differ-

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[98] Jennings, *op. cit.*, pp. 54–55.

[99] James B. Burr, Lowry W. Harding, and Leland B. Jacobs, *Student Teaching in the Elementary School.* New York: Appleton-Century-Crofts, Inc., 1950, pp. 254–256.

[100] Yoakam and Simpson, *op. cit.*, p. 225.

ences. Such grouping has as its two-fold purpose helping children realize maximum achievement in the traditional tool subjects and optimum skill in group living in a democracy. Therefore intraclass grouping proposes (1) to bring together children with common needs into groups of convenient size for instructional purposes and (2) to set up a framework of small groups within which children feel secure and socially competent and gain valuable experience in group living.

A teacher must clearly recognize this two-fold purpose of intraclass grouping if she is to assume a desirable role in her direction of group work in the classroom. She must become a member of the democratic class group and still retain her position of adult responsibility and leadership. She must continually be concerned with problems of academic achievement, democratic group action, and personal adjustment of pupils. Probably no part of the work of the teacher is of more significance than the help she gives children in identifying problems and reaching democratic decisions.

Group work can flourish only in certain classroom environments. The curriculum must be broad, flexible, and socially significant. The environment should be rich in resource and teaching materials, and the best possible use of such materials must be practiced. There must be continuous teacher-teacher and teacher-pupil planning and evaluation, for the highest type of group work can be realized only when there is continuous criticism and change.

Guideposts for the teacher to use as she faces problems of management of intraclass groups are to be found scattered through the limited professional literature on the subject. Below is a suggested summary of such guideposts:

1. There must be free interaction among members of the group, and adequate communication must be established and maintained at all times.
2. Groups must accept common goals through the recognition of common problems, and they must agree as to a system of values.
3. Control must be exercised in co-operative effort, even including implicit or explicit agreement upon the limitations of individual rights.
4. Sincere appreciation for all types of contributions to group effort is basic, and provisions must be made for the exercise of many talents and abilities.
5. Roles of leadership and followship must be ever shifting. The ideal is no group leaders and no group followers, only group members.
6. To work together successfully a group must have sufficient specific skill to accomplish the task accepted and sufficient social skill to

work together without failure or undue frustration. Intraclass grouping must be related to the particular activities planned.

7. Satisfactory group work is impossible without continuous analysis and evaluation. Even the youngest children in the elementary school must be led to evaluate the way in which they work as well as to evaluate their accomplishments.

8. Pupil-pupil relationships establish the setting within which all group work takes place. The sociometric test is a useful device for helping the teacher look at the social dynamics within her class.

9. A rich background of informations about the children in a class is essential to the teacher's successful guidance of intraclass groups.

10. Good classroom organization and managerial ability on the part of the teacher make possible efficient direction of intraclass groups.

Although an examination of the professional literature on the subject does reveal some general principles for working with intraclass groups, the information now available points clearly to the need for more research on the subject. Some of the problems which need careful reaserch are: (1) What are the best bases for intraclass grouping, and what specific criteria can be used for organizing such groups? (2) What are the most appropriate activities for intraclass groups on various grade levels? (3) In what ways can the teacher relate herself to several groups working at one time, and what are the relative merits of the different ways? (4) What are the specific roles of leadership that pupils should assume, and how can training for such roles be given? (5) How is class unity maintained when there is much group work? (6) What is a desirable balance between working as individuals, in small groups, and as a whole class? (7) What competencies in group work is it reasonable to expect of children of different ages? (8) Specifically, how can intraclass grouping be utilized to meet individual needs?

The professional literature dealing with the problem as it relates to instruction in arithmetic, reading, and social studies throws some light upon these unanswered questions. This literature is reviewed in the next chapter.

CHAPTER IV

Grouping Children for Instruction in Arithmetic, Reading, and Social Studies

Practices in intraclass grouping should be brought into harmony with all the major objectives of education, and the problem of such grouping is basically as broad as the accepted objectives of education.

This portion of the study directs special attention to the problems of grouping which are specific to the guidance of children's growth in the areas of arithmetic, reading, and social studies, and professional literature dealing with the problem in each of the three areas is reviewed here.

GROUPING FOR INSTRUCTION IN ARITHMETIC

The grouping of children for instruction in arithmetic has received very limited consideration in professional literature. An examination of the existing literature reveals very few attempts to deal with the subject in any specific manner. There is a real need for additional research on the problem.

Using grouping as a means for meeting individual differences.—In the professional literature, the problem of grouping for instruction in arithmetic within the classroom is inseparably linked with considerations of individual differences.

The individual differences found in any class (1) give rise to the necessity for grouping of children and (2) determine the nature of the groupings which should be used. This dual relationship between grouping practices and range and distribution of individual differences should be clearly held in mind as the arithmetic teacher makes decisions in regard to grouping procedures.

There is complete agreement on the part of writers that it is absolutely necessary to adapt instruction to the various needs, interests, and capacities of individual children and that "mass instruction" is inadequate for meeting the problems facing the teacher today. Brueckner and Grossnickle stated that the policy of teaching all children in any grade the same processes in arithmetic is indefensible and that any plan of

teaching number processes organized on a grade basis is outmoded because such a plan violates all that is known about individual differences in any group of pupils.[101]

Wingo made an interesting contribution by pointing out that a desirable balance between individual, small-group, and total-class activity may be destroyed by overemphasizing individual instruction in skill areas.[102]

A consideration of the range of individual differences in any class usually produces very convincing evidence that provisions for individualization of instruction are essential.

Brueckner and Grossnickle reported the results of four tests of the Analytical Scales of Attainment in Arithmetic given to nine selected groups of typical fifth-grade children, all eleven years of age.[103] These same authors also reported the ranges in chronological ages, mental ages, arithmetic reasoning, and computation of pupils in grades III through VI in a typical small school system of the Middle West.[104] Both of these studies clearly indicate the wide range of individual differences in classes which must be taken into consideration in planning an instructional program in arithmetic.

In a discussion of the problem of meeting individual differences as it is faced by the arithmetic teacher, Brueckner and Grossnickle pointed out that "individualization of instruction" does not imply that the instruction must be so organized that each individual works by himself on a specific task but that actually certain capacities of the individual are stimulated by association with others.[105] If this point of view is accepted, one does not reach the conclusion that the wide range of differences found in typical classrooms makes grouping impractical.

The organization and guidance of intraclass groups.—Professional literature carries very few practical suggestions for the organization and direction of grouping for instructional purposes, and practically none of these suggestions are oriented specifically to the arithmetic program.

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[101] Leo J. Brueckner and Foster E. Grossnickle, *How to Make Arithmetic Meaningful.* Philadelphia: The John C. Winston Company, 1947, p. 89.

[102] Max G. Wingo, "Implications for Improving Instruction in the Upper Elementary Grades," *Learning and Instruction,* The Forty-ninth Yearbook of the National Society for the Study of Education, Part I. Chicago: The University of Chicago Press, 1950, p. 297.

[103] Brueckner and Grossnickle, *op. cit.,* p. 398.

[104] *Ibid.,* p. 77.

[105] *Ibid.,* p. 396.

A local committee concerned with the teaching of mathematics in the Chicago Schools prepared a description of a plan for differentiating instruction without dividing the class.[106] This plan provided for printed instructional materials on three different levels, the lowest of which covered "minimum essentials for later mathematics and for life." The class was kept intact, and the teacher gave group instruction on each new procedure and skill. All pupils were required to master the minimum essentials and were allowed, but not required, to do what they could on the two more advanced levels.

Although the above statement refers to a method of meeting individual differences without dividing the class, the description suggests a plan of working with intraclass groups which some teachers use. The plan might be described as horizontal enrichment as opposed to vertical enrichment. The plan does not make provisions for groups to master different concepts and processes. In an extreme form, this plan simply requires faster groups to cover more problems than slower groups.

It is rather surprising that the relationship between the available instructional materials and the problem of grouping for instruction in arithmetic has not been discussed. It appears obvious that the teacher who has available copies of only a single textbook and no instructional materials especially designed for developing number concepts and skills could hardly provide varied number experiences for several intraclass groups.

A discussion in "Arithmetic 1948" of the laboratory method for making arithmetic meaningful suggests the setting in which work in small groups can best progress.[107] The statement is made in this discussion that the use of certain visual and manipulative materials can change the conception of the nature of the classroom for arithmetic instruction. Attention is called to the fact that a classroom must have equipment if it is to become a laboratory where pupils can discover and acquire useful ideas. Charts, posters, rulers, markers, measuring cups, and familiar weights and measures were given as examples of equipment which may be termed "non-mathematical," and the abacus, place-value pockets, fractional parts, fractional disks, and a board containing 100 disks for teaching the meaning of decimals and per cent were

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[106] William H. Johnson, "Some Problems in the Field of Elementary School Arithmetic," *Educational Forum*, VIII (May, 1944), 390.

[107] G. T. Buswell (editor), "Arithmetic 1948," *Supplementary Educational Monographs*, No. 66. Chicago: The University of Chicago Press, October, 1948, p. 2.

given as examples of equipment which may be termed "mathematical."

Tilton reported a study which calls attention to the importance and potentialities of individual instruction.[108] The study was conducted to test the belief that a small amount of individual instruction can produce demonstrable results. Thirty-eight children in four fourth grades were the subjects and were carefully paired, giving two parallel groups of nineteen children each. One group was given twenty minutes of individual help each week for four weeks. Standardized tests were given at the beginning of the experiment and three weeks after the last period of individual help. Statistical treatment of the results led Tilton to state, "It is evident, therefore that a small amount of individualization of instruction can be very worth while."[109] Teachers should clearly understand that working with intraclass groups for instruction in arithmetic does not exclude the possibility for giving the type of individual instruction described by Tilton.

According to Clark, although we are currently using the techniques of individual progress, sub-grouping within the class, "group process" with the entire class, and the like, we have yet to learn how, in classroom practice, to take effective account of varying rates of maturation.[110] A review of pertinent literature would lead one to agree with Clark and would suggest that further study should be given to intraclass grouping for instruction in arithmetic as a technique for meeting the problem of varying rates of maturation.

Grouping for Instruction in Reading

Grouping children for instruction in reading has become common practice in many elementary schools, and the subject has received considerable attention in professional literature.

Wilson described present grouping practices and called attention to the fact that instruction in small groups is particularly effective in administering the basal reading program.[111]

The increasing use of grouping in the teaching of reading is due not only to efforts to care more skillfully for individual differences but also

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[108] J. W. Tilton, "Individualized and Meaningful Instruction in Arithmetic," *The Journal of Educational Psychology*, XXXVIII (February, 1947), 83–88.

[109] *Ibid.*, p. 84.

[110] John R. Clark, "Child Development through an Arithmetic Program," *The National Elementary Principal*, XXXIX (December, 1949), 25.

[111] Mary C. Wilson, "Individualizing Reading Instruction," *Peabody Journal of Education*, XXVI (January, 1949), 198–199.

given as examples of equipment which may be termed "mathematical."

Tilton reported a study which calls attention to the importance and potentialities of individual instruction.[108] The study was conducted to test the belief that a small amount of individual instruction can produce demonstrable results. Thirty-eight children in four fourth grades were the subjects and were carefully paired, giving two parallel groups of nineteen children each. One group was given twenty minutes of individual help each week for four weeks. Standardized tests were given at the beginning of the experiment and three weeks after the last period of individual help. Statistical treatment of the results led Tilton to state, "It is evident, therefore that a small amount of individualization of instruction can be very worth while."[109] Teachers should clearly understand that working with intraclass groups for instruction in arithmetic does not exclude the possibility for giving the type of individual instruction described by Tilton.

According to Clark, although we are currently using the techniques of individual progress, sub-grouping within the class, "group process" with the entire class, and the like, we have yet to learn how, in classroom practice, to take effective account of varying rates of maturation.[110] A review of pertinent literature would lead one to agree with Clark and would suggest that further study should be given to intraclass grouping for instruction in arithmetic as a technique for meeting the problem of varying rates of maturation.

Grouping for Instruction in Reading

Grouping children for instruction in reading has become common practice in many elementary schools, and the subject has received considerable attention in professional literature.

Wilson described present grouping practices and called attention to the fact that instruction in small groups is particularly effective in administering the basal reading program.[111]

The increasing use of grouping in the teaching of reading is due not only to efforts to care more skillfully for individual differences but also

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[108] J. W. Tilton, "Individualized and Meaningful Instruction in Arithmetic," *The Journal of Educational Psychology*, XXXVIII (February, 1947), 83–88.

[109] *Ibid.*, p. 84.

[110] John R. Clark, "Child Development through an Arithmetic Program," *The National Elementary Principal*, XXXIX (December, 1949), 25.

[111] Mary C. Wilson, "Individualizing Reading Instruction," *Peabody Journal of Education*, XXVI (January, 1949), 198–199.

to efforts to make reading instruction more socially constructive. Writers have expressed the opinion that the reading period should be made more constructive socially. For example, the statement has been made that fixed reading groups have contributed to children's misjudgments of their own ability and of the ability of their classmates and that too much emphasis has been placed on competition rather than mutual helpfulness.[112]

Durrell expressed the opinion that the best method of meeting individual differences is usually through work with small groups in the regular classroom.[113] Murphy agreed that the most feasible method of meeting individual differences in reading in the primary grades is through group instruction.[114]

Advantages of grouping for reading instruction.—Writers have listed advantages of grouping for instructional purposes. Wilson gave a typical list of the advantages of small-group instruction in reading.[115] She developed the point of view that small-group instruction makes it possible for the teacher to adjust the time element, materials, methods, assignments, and distribution of practice to individual needs of pupils and that through such instruction reading may serve a more crucial purpose because it can be correlated with the content subjects.

Betts indicated that grouping of pupils within the classroom facilitates informal activities such as the preparation of a frieze or a dramatization and furnishes an economical means of providing for varying rates of learning and a range of interests, but he warned that homogeneity is a fiction and pointed out the wide range of differences even within these small groups.[116]

After recognizing the merit of most types of grouping, Bond and Handlaw called attention to the following unwise procedures: (1) Groups within a class are sometimes so dramatically set apart that some children are made to feel inferior and others become smug and complacent. (2) Groups may become fixed and inflexible. (3) Teachers may

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[112] C. DeWitt Boney (chairman of the Committee on Reading in the Elementary Grades of the National Council of Teachers of English), *Children Learn to Read.* Chicago: The Council, 1949, p. 20.

[113] Donald D. Durrell, *Improvement of Basic Reading Abilities.* New York: World Book Company, 1940, p. 67.

[114] Helen A. Murphy, "Skills Instruction in Primary Reading," *The National Elementary Principal,* XXIX (December, 1949), 6.

[115] Wilson, *op. cit.,* p. 200.

[116] Emmett A. Betts, *Foundations of Reading Instruction.* New York: American Book Company, 1946, pp. 390–391.

assume that grouping relieves them of further needs to individualize instruction. (4) It is possible for a class as a whole to fail to consider problems all have in common when each group follows a different course of study. (5) A teacher may develop the inclination to have each group do a different thing with the same selection. (6) On the other hand, the teacher may feel that she can well have the children do exactly the same things so long as they are given different selections.[117]

Using Grouping as a means of meeting individual differences.—A consideration of grouping for instruction in reading must necessarily include some recognition of the range of differences in reading abilities.

Durrell recognized the wide range of individual differences in reading abilities which increases with each grade level in a school, and he attributed these differences to variations in intelligence, in sensory capacities and physical condition, in background of language development, and in confusion and faulty habits in the learning process.[118]

Russell presented a similar account of the range of abilities in reading groups and emphasized the fact that the effect of schooling and other experience is in general to increase differences rather than to decrease them.[119] The teacher must accept the fact of differences in abilities and achievement in groups and meet the problem of these differences in the best way possible.

In a different publication, the same writer commented upon the characteristics of individual differences in reading ability on different reading levels.[120] According to this writer, the characteristics of individual differences in reading vary considerably because of the reading process itself. For example he pointed out that children in the low first grade will differ in abilities to contribute to a discussion, to follow directions, to interpret pictures, and to perceive likenesses and differences in objects and symbols; that children in the second or third grade will differ in their abilities to get the main thought of a short para-

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[117] Guy L. Bond and Bertha Handlaw, *Adapting Instruction in Reading to Individual Differences* (Series on Individualization of Instruction, College of Education, University of Minnesota). Minneapolis: The University of Minnesota Press, 1948, pp. 65–68.

[118] Durrell, *op. cit.*, p. 38.

[119] David H. Russell, *Children Learn to Read.* Boston: Ginn and Company, 1949, pp. 329–330.

[120] David H. Russell, "Reading and Child Development," *Reading in the Elementary School,* The Forthy-eighth Yearbook of the National Society for the Study of Education, Part 2. Chicago: The University of Chicago Press, 1949, p. 25.

graph, to recognize a new word by a combination of two or three techniques, and to make use of what is read; and that similarly children in a sixth grade will differ in their abilities to use basic skills associated with word recognition and comprehension, to apply syllabication and other advanced word-recognition techniques, to read rapidly, and to differentiate the reading process in reading diverse types of materials.

Kawin described some of the actual differences in abilities found in a specific class.[121] She concluded that children's successes and failures in the reading process are determined by a constellation of many contributing elements such as mental age, chronological age, intelligence quotient, "readiness," social background, emotional and social adjustments, interests, and attitudes.[122]

Zirbes expressed the same idea by stating that it is relatively simple to sort individuals into closely homogeneous classes or groups on the basis of a single trait or criterion but that no one criterion is so basic, so stable, and so significant that it should take precedence over others.[123]

The organization of groups.—As the teacher organizes her class for group work she is faced with a number of problems. Typical of the questions which arise are: What should be the basis for grouping? How many groups should be formed? What are desirable group activities? How can the teacher direct the work of several groups at one time?

Betts suggested that the primary considerations in grouping children for instruction in reading are: (1) the instructional reading level of the children, (2) the general interest level of the children, and (3) the specific needs of children embracing language skills, concepts, critical reading, social adjustment, or other learnings varying all the way from word recognition to reorganization of information.[124]

Russell presented suggestions for intraclass grouping which gave consideration to the same three groups of factors listed by Betts.[125]

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[121] Ethel Kawin, "Individual Differences Among Pupils and Their Relation to the Reading Program," *Supplementary Educational Monographs*, No. 52. Chicago: The University of Chicago Press, October, 1941, pp. 60–61.

[122] *Ibid.*, p. 62.

[123] Laura Zirbes, "Individual Differences Among Pupils and Their Relation to the Reading Program," *Supplementary Educational Monographs*, No. 52. Chicago: The University of Chicago Press, October, 1941, p. 67.

[124] Emmett A. Betts, "Adjusting Instruction to Individual Needs," *Reading in the Elementary School*, The Forty-eighth Yearbook of the National Society for the Study of Education, Part 2. Chicago: The University of Chicago Press, 1946, p. 277.

[125] David H. Russell, *Children Learn to Read*, pp. 332–333.

Adams and co-authors recommended the use of three groups for instruction in reading and stressed the importance of having each group read in a basal reader at its own reading level.[126] Broom and co-authors made a parallel recommendation.[127]

In a discussion of grouping for reading instruction in the first grade, Betts made generalized recommendations for the number and size of groups that should be organized.[128] He pointed out that the number of groups that should be organized is largely dictated by the stages of language development represented in a class and that the number generally varied from three to five. He further pointed out that the size of groups depends upon the number of children with common interests and needs and that the size of groups can be increased as children achieve more independence.

There is general agreement that grouping must be kept flexible. Betts expressed the opinion that grouping practices should be of such a nature that children are permitted both to move from group to group and to work with different groups for different purposes but warned that children require the security established by membership in a compatible group and pointed out that uncertain shifting from one group to another can promote instability.[129]

Grouping practices and school organization.—In reporting on differences in curriculum practices in departmentalized and nondepartmentalized schools, Rouse reported that the practice of grouping pupils for instruction in reading is more common in the nondepartmentalized schools and that such practice is in accord with recommended procedures for the reading program.[130]

Grouping and problems of classroom management.—When a number of groups are working independently of one another, the teacher is faced with difficult problems of classroom management. One of the

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[126] Fay Adams, Lillian Gray, and Dora Reese, *Teaching Children to Read.* New York: The Ronald Press Company, 1949, p. 229.

[127] M. E. Broom, et al., *Effective Reading Instruction in the Elementary School.* New York: McGraw-Hill Book Company, 1942, p. 235.

[128] Emmett A. Betts, "Adjusting Instruction to Individual Needs," *Reading in the Elementary School,* The Forty-eighth Yearbook of the National Society for the Study of Education, Part 2. Chicago: The University of Chicago Press, 1946, pp. 277–278.

[129] *Ibid.,* p. 278.

[130] Margaret Rouse, "A Comparison of Curriculum Practices in Departmental and Nondepartmental Schools," *The Elementary School Journal,* XLVII (September, 1946), 37–38.

problems is that of providing activities that children can carry out independently. Russell suggested the following activities which can be carried out independently by children and which contribute to children's progress in reading: (1) silent reading to answer questions placed on the blackboard, (2) silent reading to answer mimeographed or hectographed exercises, (3) using workbooks, (4) preparing a selection for audience reading, (5) preparing for some future activity such as drawing, dramatizing a story, making a book report, or telling stories, (6) reading library or supplementary books, (7) making illustrations, (8) reading under the guidance of a pupil leader, (9) using teacher-made and pupil-made games and exercises, and (10) following suggestions for free-time activities that are posted around the room.[131]

Murphy advocated the use of "pupil teachers" with groups while they are not working under the immediate supervision of the teacher.[132] These "pupil teachers" are members of the groups because they need the work of the groups and are responsible only for practice exercises on material presented to the groups by the teacher. He suggested that some appropriate activities which can be carried out in these small groups under pupil leadership are: (1) word and phrase drills, (2) oral and silent reading, (3) comprehension checks, and (4) drill through use of games.

Betts stated that small groups may be organized for directed activities for the systematic development of reading skills or may be organized around interests of the children.[133] He effectively pointed out the necessity for adequate preparation to give pupils (1) an understanding of the purpose of the work to be done, (2) the working techniques to be employed, and (3) the available self-help aids.[134]

Bond and Handlaw presented the following general principles which should guide the teacher as she organizes her class into small groups for instruction in reading: (1) At first the number of groups should be limited to about three. (2) Groups should be kept flexible in both personnel and size. (3) All groups should feel that they are contributing something toward solving a problem in which all are interested. (4) All

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[131] David H. Russell, *Children Learn to Read*, p. 335.

[132] Murphy, *op. cit.*, p. 7.

[133] Emmett A. Betts, "Adjusting Instruction to Individual Needs," *Reading in the Elementary School*, The Forty-eighth Yearbook of the National Society for the Study of Education, Part 2. Chicago: The University of Chicago Press, 1946, p. 278.

[134] *Ibid*, p. 279.

groups need selections and assignments suited to their needs. (5) It is wise to occasionally abandon group organization and have the whole class work together.[135]

Durrell listed six considerations which the teacher should recognize in organizing small group instruction: (1) The groups should have common needs. (2) Grouping should be flexible. (3) The teacher should introduce small-group work gradually. (4) Each group should be in charge of a pupil who is a member of the group. (5) Assignments should be carefully planned. (6) A list of pupil needs should be at hand as a lesson is planned.[136]

The need for adequate instructional materials.—There has been general recognition of the importance of instructional materials to the reading program. In a discussion of adjusting instruction to individual needs, in the forty-eighth yearbook of the National Society for the Study of Education, the statement has been made that the use of insructional materials is a crucial factor in adjusting instruction to individual needs because many children experience frustration when the content of instructional materials is too difficult and others become bored when the instructional materials are inappropriate.[137]

Whipple suggested the following materials for the reading program: (1) for the primary grades—foundation reading materials, experience-reading materials constructed for particular groups, supplementary books in sets, sets and single copies of books in each content field, prose and poetry for the teacher to read to the children, sets and single copies of children's literature that are easy enough for the children to read, a classroom library, pamphlets, children's newspapers and magazines, and access to a school or a public library or both, and (2) for the later-elementary grades—sets and single copies of a large number of basic and supplementary books and other books on each theme for reading, dictionaries, books for each content field, children's encyclopedias, a generous supply of children's literature in sets and single copies, a classroom library of at least two books per pupil for free reading, magazines, and current events materials.[138]

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[135] Bond and Handlaw, *op. cit.*, pp. 69–70.

[136] Durrell, *op. cit.*, pp. 68–72.

[137] Emmett A. Betts, "Adjusting Instruction to Individual Needs," *Reading in the Elementary School*, The Forty-eighth Yearbook of the National Society for the Study of Education, Part 2. Chicago: The University of Chicago Press, 1946, pp. 276–277.

[138] Gertrude Whipple, "Desirable Materials, Facilities, and Resources for Reading," *Reading in the Elementary School*. The Forty-eighth Yearbook of the

In a discussion of the organization of the reading program at the intermediate and upper grade levels, Adams and co-authors gave a list of desirable materials that parallels the list given by Whipple.[139]

Russell pointed out the necessity for adequate reading materials and suggested criteria for evaluating the adequacy of materials for developing skills and habits, for information, for recording and guiding other curricular activities, for fun and appreciation, and for extra practice in certain phases of reading.[140]

Grouping on various grade levels.—Obviously grouping practices must vary with the maturity of the class. Special attention has been focussed upon the problem of grouping in the first grade.

Durrell called attention to the difficulty of grouping immature children and expressed the opinion that a difference of six months at this level represents a much greater instructional problem that a difference of two years at a sixth-grade level.[141]

In "A Look at the School Beginners," Hildreth stated that readiness surveys of school entrants bring out two striking facts: (1) the extremely wide range of maturity found in typical entering groups and (2) the relative immaturity of a large proportion of the children for the conventional first-grade program.[142]

Adams, Gray, and Reese described the three groups in "Hometown First Grade," one group that could start in the book and move along quite rapidly, one that could soon begin with a preprimer but could move only at a moderate rate, and one that still needed reading readiness work.[143] These groups are commonly found in classrooms.

The same authors gave an account of grouping in an imaginary third-grade classroom which forms an interesting contrast to the grouping in "Hometown First Grade."[144] The class of about thirty children is informally grouped about the room. The number of children in the groups vary from two or three to five or six. The material being

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National Society for the Study of Education. Part 2. Chicago: The University of Chicago Press, 1949, pp. 160-161.

[139] Adams, Gray, and Reese, *op. cit.*, pp. 226–227.

[140] David H. Russell, *Children Learn to Read*, pp. 335–337.

[141] Durrell, *op. cit.*, p. 39.

[142] Gertrude Hildreth, "Reading Programs in the Early Primary Period. *Reading in the Elementary School*, The Forty-eighth Yearbook of the National Society for the Study of Education, Part 2. Chicago: The University of Chicago Press, 1949, p. 59.

[143] Adams, Gray, and Reese, *op. cit.*, p. 171.

[144] *Ibid.*, pp. 214–216.

used shows a spread of reading difficulty from the first grade to at least the fourth grade. Some children are doing work-type reading, some are reading "just for fun," and some are reading easier material under the direct guidance of the teacher. All groups are planning to report back to the rest of the class.

Wilson reported the experimental use of reading groups in a third-grade classroom.[145] Because of frequent statements from supervisors to the effect that teachers failed to carry out a differentiated program of reading, the writer was prompted to carry on an experiment in a typical rural classroom. Intraclass grouping was the basis of the program of the reading instruction given, and the experiment indicated better than normal progress in reading for the class.

In a discussion of the problem of grouping in the upper primary grades, Hildreth stated that results of inventories prove that it is futile to give a common assignment to an entire ungrouped second- or third-grade class.[146] She recommended working with at least three reading groups which are kept flexible and which are based upon the level of reading which the pupils can do independently rather than upon the level of reading which they can do with the help of the teacher.

The problem of grouping children in the upper elementary grades has received less attention than the problem of grouping children in the primary grades. McKee has given a clear picture of the problem in the intermediate grades.[147] He called attention to the fact that the poorest reader in a typical fifth-grade class may read no more effectively than the average second-grade child, While the best reader in the class may read as well as the average pupil in the first year of high school. He expressed the opinion that grouping for instruction in reading is helpful in providing teaching adjusted to the needs of the individuals in the class if such grouping is kept flexible and if the teacher makes instructional adjustments within each group to meet the needs of the individuals in the group.

A description by Russell of the way children differ in reading ability as they progress through the grades may help to bring into proper per-

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[145] Mary C. Wilson, "The Teacher's Problems in a Differentiated Reading Program," *Elementary English*, XXIV (February, 1947), 77–85.

[146] Gertrude Hildreth, "Reading Programs in Grades II and III," *Reading in the Elementary School*, The Forty-eighth Yearbook of the National Society for the Study of Education, Part 2. Chicago: The University of Chicago Press, pp. 96–97.

[147] Paul McKee, *The Teaching of Reading in the Elementary School*. Boston: Houghton-Mifflin, 1948, pp. 353–354.

spective the relationship of the maturity of classes and desirable grouping practices.[148] According to Russell, children in the first grade vary in ability to make a contribution to group experiences, in background of experience, in speaking and understanding vocabularies; children in the upper primary grades vary in these respects and also in ability to read orally from primary readers after a silent reading, in ability to associate ideas with printed materials, in ability to read for two or three different purposes, in ability to move eyes from left to right and make accurate return sweep, in ability to care for books, and in ability to work independently; and in the intermediate grades there is a gradual shift from these differences to differences in basic skills and habits making for ease and efficiency in reading, in knowledge of children's literature, in knowledge of sources of information, in ability to use different approaches for different purposes, in work-type and study skills, and in skill in other related language arts.

Evaluating grouping procedures.—Betts presented a helpful set of questions which are pertinent to the evaluation of grouping procedures as they relate to instruction in reading.[149] The questions in this detailed list are grouped under the following six major questions; (1) Does grouping foster desirable social conditions of learning? (2) Does the grouping maintain the basic integration of the child? (3) Does the grouping provide for the reading needs of all children in the class? (4) Does grouping promote versatility and independence in reading and study? (5) Are children provided with a more satisfactory selection of reading materials? (6) Are remedial and corrective reading problems substantially reduced?

Grouping for Instruction in Social Studies

In many situations it is customary to have children in the elementary school work in small groups as activities emerge from the development of social studies units. It is therefore surprising to find that the problem of grouping children for instruction has received very little attention in the professional literature dealing specifically with the teaching of social studies.

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[148] David H. Russell, *Children Learn to Read*, pp. 331–332.

[149] Emmett A. Betts, "Adjusting Instruction to Individual Needs," *Reading in the Elementary School*, The Forty-eighth Yearbook of the National Society for the Study of Education, Part 2. Chicago: The University of Chicago Press, 1946, pp. 279–280.

Grouping as a means of meeting individual differences.—The individuals in any social studies class present a wide range of individual differences, and the teacher must find ways to care for these differences.

According to Wesley and Adams, the typical social studies class is an epitome of society, and the teacher should encourage democratic practices which nourish, encourage, and uphold individual differences.[150]

Anderson and Krug called attention to the fact that there is no procedure which is a complete solution to the problem of adapting instruction to individual differences.[151] If this point of view is accepted, intraclass grouping is not looked upon as a final answer to the problem of individualization of instruction.

Wingo suggested group work with the social setting as a promising procedure for caring for individual differences in social studies classes.[152]

Organizing the class for group work.—Branom wrote that a class may be organized in a variety of ways for instruction in social studies: as a whole, in small groups, by individuals, or in some combination of these three ways.[153] He further suggested that the class may be grouped in different ways at different times, depending upon the needs of the pupils and the work in progress.[154]

Stephenson stated emphatically that homogeneous grouping is not sound as a basis for organizing the social studies class.[155] However, he did not give positive suggestions for bases for grouping.

Preston considered it unwise to consistently select committees for work in social studies on a voluntary basis, and he expressed the belief that the teacher should ordinarily take an important part in their formation to avoid having social studies become a vehicle for perpetuating and entrenching social cliques.[156] He also suggested that it is rarely

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[150] Edgar Bruce Wesley and Mary A. Adams, *Teaching Social Studies in the Elementary School.* Boston: D. C. Heath and Company, 1946, p. 215.

[151] G. Lester Anderson and Edward Krug, "Adapting Instruction to Individual Differences—A Professional Problem," *Adapting Instruction in the Social Studies to Individual Differences*, The Fifteenth Yearbook of the National Council for the Social Studies, a Department of the National Education Association. Washington: The Council, 1944, p. 153.

[152] Wingo, *op. cit.*, pp. 297–298.

[153] Frederick K. Branom, *The Teaching of Social Studies in a Changing World.* New York: W. H. Sadler, Inc., 1942, p. 198.

[154] *Ibid.*, p. 201.

[155] Orlando W. Stephenson, "Implication of Individual Differences in Social Studies Teaching," *Social Education*, XI (November, 1947), 302.

[156] Ralph C. Preston, *Teaching Social Studies in the Elementary School.* New York: Rinehart and Company, 1950, pp. 86–87.

efficient to have large committees, for having committees which are larger than the requirements of the job wastes time, produces poor work habits, and may bring about discipline problems.[157]

The need for adequate instruction materials.—The teacher must have adequate instructional materials at her disposal if she is to provide for group work in the social studies class. According to Horn, probably no other factor shapes and delimits method so incisively as does equipment, and the best cure for ills attending the textbook method of teacheing is a wealth of materials other than textbooks with which to work.[158] Teachers can not be expected to model methods on the best modern practice when the equipment presupposed for such practice is not available.

Descriptive accounts of group work.—Descriptive accounts of groups at work help to clarify the problem of grouping for instruction in social studies. Three such accounts are cited here. Tippett described a fifth-grade class working on a unit on textiles.[159] Otto reported a diary kept by a sixth-grade class working on puppets.[160] Saucier gave a good description of the way a third-grade class attacked a unit on colonists.[161]

SUMMARY

The problem of intraclass grouping is a very broad one inseparably linked to the acceptance of broad objectives of education. Therefore one major aspect of the problem is intraclass grouping for instruction in arithmetic, reading, and social studies.

An examination of the professional literature which deals specifically with the problem as it relates to instruction in these areas indicates that this literature clarifies the problem very well and points to badly needed research. The following generalizations may be drawn from the literature:

1. The problem is primarily a problem in developing techniques for meeting individual needs.

[157] *Ibid.*, p. 87.

[158] Ernest Horn, *Methods of Instruction in the Social Studies.* New York: Charles Scribner's Sons, 1937, p. 30.

[159] James S. Tippett, in collaboration with the Committee of the Parker School District, Greenville, South Carolina, *Schools for a Growing Democracy.* Boston: Ginn and Company, 1936, pp. 133–134.

[160] Henry J. Otto, *Principles of Elementary Education.* New York: Rinehart and Company, Inc., pp. 15–16.

[161] W. A. Saucier, *Theory and Practice in the Elementary School.* New York: The Macmillan Company, 1951, pp. 185–188.

2. Research is adequate to establish the fact of wide ranges in individual differences in instructional needs in arithmetic, reading, and social studies. This is true even within intraclass groups which are primarily achievement groupings.

3. A complex of factors must be taken into consideration in doing any intraclass grouping. In setting up reading groups, factors which are very important are instructional reading level, interests, and special instructional needs.

4. A wealth of resource and teaching materials stimulate productive group work in these areas.

5. All grouping should be flexible.

6. Provision must be made for a variety of activities if group work is to be successful.

Classroom teachers need specific suggestions to aid them in organizing intraclass groups, in establishing an environment in which productive group work can thrive, and in guiding the work of small groups working simultaneously. All such suggestions should be based on more adequate research than that which is now available.

Part Two

A Study of Practices in Intraclass Grouping in Selected Classrooms

CHAPTER V

Description of the Study of Practices in Intraclass Grouping in Selected Classrooms

Part Two is an intensive investigation of practices in intraclass grouping in six classrooms. It is the purpose of this investigation (1) to ferret out practices in intraclass grouping as they were found to exist in actual classroom situations, (2) to present a descriptive and analytical account of these practices which will serve to identify the factors involved, and (3) to make such suggestions as seem feasible for helping teachers who are interested in improving their own practices in intraclass grouping.

The study is based on (1) careful examination of school records, (2) two full-day observations in each of six classrooms, (3) a series of conferences with the teachers, and (4) sociometric tests given in four of the classrooms.

The information gathered is analyzed for (1) factors related to the organization and structure of intraclass groups, (2) problems of techniques for working with these groups, and (3) the role of facilities in group work.

Special attention is given to the problem as it is related to the teaching of arithmetic, reading, and social studies.

THE SITUATIONS STUDIED

The present investigation considers practices in intraclass grouping in six classrooms in the Casis Elementary School, Austin, Texas. This school is a center designed for research and demonstration in elementary education and is co-operatively administered by The University of Texas and the Austin Public Schools. As do other public schools in Austin, the Casis Elementary School serves a definitely designated attendance area, and any selective factors regarding pupil population are those normally in operation in the formation of neighborhoods in a community.

The practices in intraclass grouping for intsructional purposes here reported are those in operation in the selected classrooms during May,

1951. The enrollment of the school at that time was 461, and the school had fourteen regular classrooms enrolling children in grades one through six. In addition to the regular elementary school program, there is a program of special education in this school. However, no class in special education is considered in the present study.

The school is staffed by fourteen regular classroom teachers, a librarian, and a music teacher-consultant in addition to the administrative staff and the special education teachers. Each classroom teacher is responsible for the direction of the major portion of the instruction of her class. The music specialist teaches music in the third- and fifth-grade classrooms considered and thus releases some of the classroom teachers' time for other professional activities. The music teacher goes into the first-grade classrooms and serves as a consultant, giving leadership to the teachers and pupils. Groups are free to use the library at any time. Either an entire class or a group from a class is free to go to the library as the need arises, and there are few regularly scheduled library periods. The librarian helps the children develop skill in use of the library and is always available to give necessary assistance.

In general, the staff attempts to place each pupil in the class where he can realize maximum personal development. No rigid achievement standards are held as the basis for promotion, and no effort is made to bring about homogeneous grouping in terms of either achievement or ability.

The Casis Elementary School was opened for the first time in January, 1951. The age of the school is an important factor in determining the adequacy of objective records. Because of the short time the school had been in operation, the cumulative records were not as complete at the time of the study as they will be in the future. This fact explains why some information is not presented that might be desirable. The children in the six classrooms were attending six different elementary schools at the time they were transferred to this new school. The fact that these children, drawn from different school situations, learned to work together in groups most satisfactorily in a very short time certainly attests to the effectiveness of the practices in grouping employed in this school.

An unusually consistent educational philosophy permeates the work done in this school. The teachers are accustomed to working co-operatively on their common problems. All the co-operating teachers had worked together consistently since the school opened, and several of the staff members had previously worked together on projects. It can be

assumed that the practices reported have much in common because of a common philosophy growing out of mutual study. The fact that some practices were consistently found in the six classrooms should not be interpreted as being indicative of administrative domination.

The Subjects

The investigation is concerned with practices in intraclass grouping in six classrooms, two sections each of grades one, three, and five. There were one hundred boys and ninety-two girls enrolled in these six sections on May 1, 1951. The enrollment in the sections ranged from thirty to thirty-four. Table I gives the enrollment and sex distributions in the six classes.

Table I

Enrollment in Classes

Class	Number of Pupils		
	Boys	Girls	Total
I-1	17	15	32
I-2	17	13	30
III-1	14	18	32
III-2	14	18	32
V-1	15	17	32
V-2	23	11	34
Total	100	92	192

Two sections on a given grade level are considered in order (1) to give a more extensive study of the practices in intraclass grouping on a given grade level and (2) to show parallel practices in two different situations. Grades one, three, and five are considered in order (1) to see how practices were adapted to different age levels and (2) to give a longitudinal picture of the problem.

Types of Data Utilized

Information for the descriptive and analytical account which follows was gathered from four sources: (1) a study of available records, (2) classroom observations, (3) interviews with teachers, and (4) sociometric tests.

The school records yielded the following information: (1) chronological ages of children, (2) some information in regard to the children's progress through the grades, (3) results of tests of achievement, and (4) results of tests of ability.

All classes considered were given some form of the Metropolitan Achievement Tests in May, 1951. These tests give results in terms of achievement in specific areas as well as measures of general achievement. The results of these tests serve to give a picture of the achievement of children at the time of the present investigation.

The pupils in grades three and five had been given appropriate forms of the California Test of Mental Maturity at different times. This test gives results in terms of language, non-language, and total mental ages and intelligence quotients. The pupils in grade one had not been given any group intelligence test but had been given the Mertopolitan Readiness Tests which yield measures of reading, arithmetic, and total readiness. In addition to descriptive letter ratings yielded by these tests, percentile ranks are indicated for total readiness. The results of these tests help to clarify the structure of the classes studied.

Two full-day observations were made in each classroom. No formal instrument for guiding the observations was used. The investigator simply tried to get as full a descriptive account of the actual practices followed as possible. However, a previous analysis of the problem of intraclass grouping served as a background for the observations. The analysis of the problem was based upon a series of full-day and spot observations not here reported and the research reviewed in Part One. Certain factors were kept in mind as the observations were made. In general these factors are the ones discussed in Chapters IX and X.

The six classroom teachers contributed valuable information during nineteen interviews consuming approximately twenty-five hours. Each teacher was interviewed at least three times and gave a minimum of three hours to the conferences. The interviews varied in length from thirty minutes to four hours.

The interviews were informal and did not follow a definite plan nor utilize any objective instrument for securing information. The investigator and the individual teacher talked together about the objectives the teacher had in grouping, the problems she met, and the practices which she utilized. The investigator simply attempted to discuss the problem with the individual teacher until the teacher's philosophy and practices seemed to be understood. An effort was made to keep a very full but informal record of all interviews. The previous analysis of the problem of intraclass grouping referred to above also indirectly helped to establish a framework for the interviews. This form of interview was used for two reasons: (1) such a procedure yields full and detailed information, and (2) it encourages the interviewer to follow leads

given by the teacher and in the long run gives more varied information than would likely be collected during a more highly formalized interview.

The teachers of the third- and fifth-grade classes gave their classes sociometric tests. These tests help clarify the structure of the classes and give some indication of the pupils' attitude toward group work. The tests were very simple. The third-grade children were given a sheet entitled "Friends to Work With" which carried the following three questions and blanks for answers:

What three children in your room would you most enjoy having in your reading group if the reading groups could be changed before school is out?

What three children in your room would you most enjoy having in your arithmetic group if the arithmetic groups could be changed before school is out?

What three children in your room would you most enjoy working with on a committee appointed to help in the study of some subject the class is interested in?

The last question refers to the type of work most frequently done in small groups as part of the instructional programs in social studies. Children in these classes were not accustomed to the term "social studies groups."

Each child in a third-grade class was also given a duplicated list of the names of the children in his class. This was done to eliminate confusion and suggestions resulting from questions related to the spelling of names.

The fifth-grade children were given a slightly more detailed questionnaire entitled "Working in Groups" which carried the following questions and blanks for their answers:

What three children in your room would you most enjoy having in your reading group if the reading groups in your room were to be reorganized?

What three children in your room would you most enjoy having in your arithmetic group if the arithmetic groups in your room were to be reorganized?

What three children would you most enjoy working with on a committee in social studies?

What do you like about working in groups?

1. In reading?
2. In arithmetic?
3. In social studies?

What do you dislike about working in groups?

1. In reading?
2. In arithmetic?
3. In social studies?

Analysis of the Information

The present report is a cross-sectional, descriptive account of the practices in intraclass grouping studied. Specifically it is the study of practices in six classrooms in the Casis Elementary School, Austin, Texas, during May, 1951. No attempt is made to follow the practices through time in any given situation.

All information gathered is analyzed for factors related to: (1) the organization and structure of intraclass groups, (2) techniques for working with such groups, and (3) the role of classroom facilities, equipment, and instructional materials. Special attention is given to the problem as it is related to instruction in arithmetic, reading, and social studies.

Organization of the Information

This study presented the problem of arriving at the most feasible way to organize the information gathered about the six classes which were studied somewhat intensively. One plan would have been to put into a single chapter all statistical, sociometric, observational, and interview findings for one class. Such a plan of organization would have had the advantage of affording unity of presentation for a given class but the disadvantage of not affording an overview of any one major aspect of the study for a series of grade levels. Such a plan would also have resulted in a great deal of repetition. A second plan would have been to assemble the findings for all six classes by major topics. Such a plan of organization would have had the disadvantage of making it difficult to see each class as an operating unit. This dilemma was resolved by using in part each of the two plans of organization. Chapters VI through VIII present information dealing with the organization and structure of intraclass groups by classes. On the other hand, Chapter IX deals with the guidance of intraclass groups in all six classrooms, and Chapter X is a discussion of the role of classroom facilities, equipment, and instructional materials in group work in all six classrooms. In Chapters IX and X frequent use is made of data which refer back to the preceding chapters in order to give the presentation of all information some unity.

Chapters VI, VII, and VIII describe the organization and structure of intraclass groups in Classes I-1, III-2, and V-1. Consideration is given to the organization and structure of intraclass groups in only three classrooms because reporting such information for all six classes would have resulted in a voluminous account with considerable repetition.* The selection of Classes I-1 and V-1 is arbitrary, for it would have been equally satisfactory to report information for Classes I-2 and V-2. Information for Class III-2 is reported because this class was grouped for instruction in arithmetic at the time of the study while Class III-1 was not grouped for such instruction.

Chapters IX and X present information collected during interviews with all six teachers and observations in all six classrooms.

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* Information is given for all six classes in the following original report of this study which is available through interlibrary loan: Mary Clare Petty, *Intraclass Grouping in the Elementary School.* Unpublished doctoral thesis, The University of Texas, 1952.

CHAPTER VI

The Organization and Structure of Intraclass Groups in Class I-1

Before intraclass groups can be set up in a classroom, the structure of the class as a whole must be carefully studied. Moreover the structure of an intraclass group is difficult to understand without understanding the structure of the larger group of which it is a part. For these reasons attention is given to the structure of the class as a whole before considering the organization and structure of the intraclass groups. The available school records furnished very valuable information about the structure of the class as a whole.

THE STRUCTURE OF THE CLASS

There were thirty-two children, seventeen boys and fifteen girls, in Class I-1. The chronological age range of these children on May 1, 1951, was from six years eight months to seven years eight months. Both the youngest girl and the youngest boy were six years eight months old chronologically. The oldest boy was seven years eight months old, while the oldest girl was seven years five months old. Table II summarizes this information.

TABLE II

Distribution of Chronological Ages, Class I-1

	Number of Pupils	C. A. in Months, May 1, 1951	
		Average	Range
Boys	17	84.9	80–92
Girls	15	84.7	80–89
Total	32	84.8	80–92

As one might expect after an examination of this very limited range in chronological age, there were no children in the class who were in the first grade for the second year. Only one child, a boy who transferred to Casis Elementary School from another school system, was not an original entry in the Austin Public Schools.

The first-grade classes in Casis Elementary School had not been given intelligence tests. However, the Metropolitan Readiness Tests give measures of capacity, and these tests had been given to children enrolled in the first-grade classes in the Austin Public Schools in October, 1950. Performances on the Metropolitan Readiness Tests are interpreted in terms of letter ratings for reading readiness, arithmetic readiness, and total readiness and percentile ranks for total readiness. Results of these tests were available for twenty-seven children, thirteen boys and fourteen girls. No statement was found giving reasons why test results were not available for all children, but it is probable that absence at the time tests were given, late entrance to school, and loss of tests at time of transfer to Casis Elementary School account for this fact. The average readiness percentile rank for the twenty-seven children was 73.2, with average percentile ranks of 64.6 for the boys and 81.1 for the girls. The boys' percentile ranks ranged from thirty-three to ninety-three, while the girls' percentile ranks ranged from forty-five to ninety-nine. Table III summarizes results of the Metropolitan Readiness Tests given this class.

TABLE III

Distribution of Readiness Test Results, Class I-1

		Readiness, October, 1950, as Measured by the Metropolitan Readiness Tests													
		Reading Readiness				Arithmetic Readiness				Total Readiness					
	Number of Pupils	Letter Ratings*				Letter Ratings				Letter Ratings				Percentile Ranks	
		A	B	C	D	A	B	C	D	A	B	C	D	Average	Range
Boys	13		9	4		1	5	6	1		4	8	1	64.6	33–93
Girls	14	5	6	2	1	2	11	1		3	8	3		81.1	45–99
Total	27	5	15	6	1	3	16	7	1	3	12	11	1	73.2	33–99

*Letter Ratings: A, "superior; B, "high-normal;" C, "average;" and D, "low-normal."

The Metropolitan Achievement Tests, Primary I, Battery, Form T were given to twenty-nine of the children in the class in May, 1951. Three children were absent when the tests were given. The age equivalent of the mean average achievement on these tests for the class was 90.2 months. The mean average achievement age was 89.5 months for the fifteen boys and 90.9 months for the fourteen girls. These mean average achievement ages are all approximately five or six months above the average chronological ages for the same groups. These tests yield measures of ability to deal with word pictures, word recognition, word

meaning, and numbers. The class as a whole did not do as well on the test of ability to deal with word meanings as they did on the other two reading tests.

The results of these tests indicated relatively higher achievement in arithmetic than in reading for the class. They also indicated that the girls were relatively more superior in numbers than in reading. Different levels of achievement in arithmetic and reading were recorded for many children in the class; for example, the lowest average achievement (five years nine months) and the highest average achievement (ten years) in arithmetic were both recorded for girls whose average reading achievement was seven years two months. These facts would indicate that the same groupings should not be used for instruction in both arithmetic and reading.

Table IV summarizes the results of the Metropolitan Achievement Tests given Class I-1, and Chart 1 shows graphically the relationship between achievement in reading and arithmetic for Class I-1.

TABLE IV

Distribution of Achievement Test Results, Class I-1

	Number of Cases	Achievement Ages, May, 1951 As Measured by the Metropolitan Achievement Tests, Primary I, Battery					
		Word Pictures	Word Recognition	Word Meaning	Average Reading	Numbers Average	Average Achievement
Boys	15						
Average		90.5	88.7	84.7	87.9	92.9	89.5
Range		82–110	82–97	77–98	80–100	78–117	80–102
Girls	14						
Average		91.1	92.0	84.8	89.2	95.6	90.9
Range		87–95	87–110	79–92	85–99	69–120	82–96
Total	29						
Average		90.8	90.3	84.7	88.5	94.2	90.2
Range		82–110	82–110	77–98	80–100	69–120	80–102

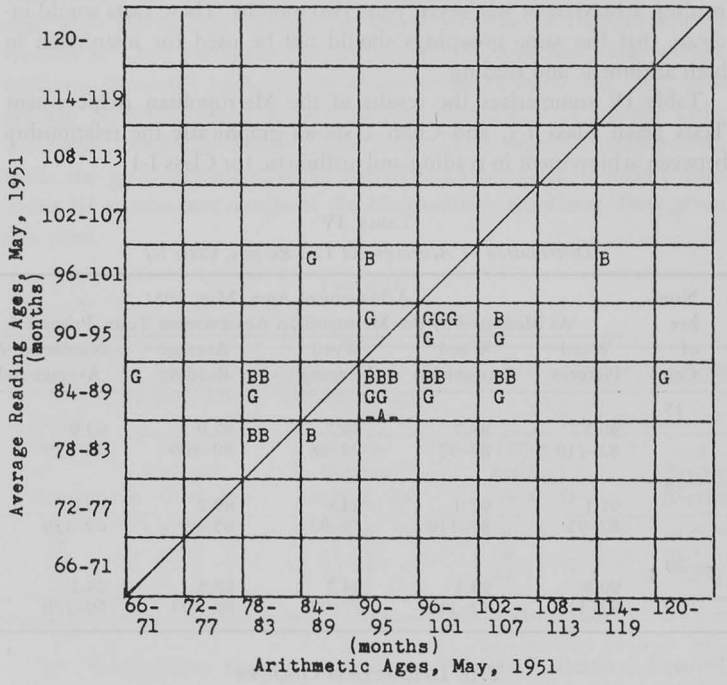
THE INTRACLASS GROUPS

The teacher of Class I-1 had organized semi-permanent intraclass groups for instruction in reading and arithmetic. The work in social studies and reading was so completely fused that the existing grouping for instruction in reading may loosely be considered as grouping for instruction in social studies. There were four groups set up for instruction in reading and three groups for instruction in arithmetic. There were no other semi-permanent intraclass groups.

The teacher frequently grouped children during the physical education period, but such grouping varied from period to period. The teacher also reported that occasions frequently arose when it was necessary to set up temporary groupings for such purposes as working with various art media or planning an excursion.

CHART 1.

THE RELATIONSHIP BETWEEN ACHIEVEMENT IN READING AND ARITHMETIC, CLASS I-1



Bases for Grouping

The teacher of Class I-1 had established groups for instruction in reading and arithmetic primarily on the basis of instructional needs. She considered both groupings as achievement groupings. However, she frequently placed a child in a group because of factors other than

achievement; social or emotional needs were usually the other major considerations. The teacher relied upon subjective judgment based upon thorough obsrvations as a primary basis for setting up instructional groups. She found results of the Metropolitan Readiness Tests very helpful in her initial steps. She considered these test results excellent for checking subjective judgment, but she did not use them as her starting point in grouping. It was not her practice to group a first-grade class for instruction until the children had been in school several weeks, and even then all children were not placed at once into small work groups. She began by drawing out of the whole class one small group that seemed ready for more formal reading instruction and by giving this group work to do more or less independently. With a large portion of her class she continued her readiness program. Other groups were set up later in a parallel fashion. She had usually found it possible to have all the children in a class doing some work independently in groups after eight to ten weeks of school. It was only after groups were working in this way that she had considered her groups as fairly definitely organized.

Her technique for setting up arithmetic groups paralleled those employed for developing grouping for reading. However, such grouping came later in the year, usually near the end of the first term.

Although the teacher of Class I-1 stated that her instructional groupings were primarily achievement groupings, she gave examples of individual children who presented interesting problems in grouping and for whom factors other than achievement had been given consideration. She told of Larry who read well and with ease on the second-grade level. She had been giving him individual assignments when he came to her and said that he wanted to read with his group all the time. At the time of the study, this child was reading consistently with the most advanced reading group in the class although he did not need such reading experiences. The teacher believed that his working regularly with the group was meeting other needs that were as important as reading needs.

She pointed out Joe as an example of a child whose achievement in reading and arithmetic varied widely. At the time of the study he was working with the slowest reading group and the most advanced arithmetic group. He was having a great deal of trouble learning to read but was described as "a whiz with numbers."

Susie of Class I-1 was reading better than most of the children in

the class but was working with Group 2* for two reasons. First, she was a child who was absent a great deal and appeared to find her work with this group less of a strain after absences than work with Group 1. Second, she seemed to be better adjusted socially in Group 2 and to gain much from working with Tina who was in Group 2. Susie had also been able to assume a role of leadership in Group 2 that was impossible in Group 1.

The Structure of the Arithmetic Groups

The school records yielded significant information for clarifying the structure of the semi-permanent intraclass groups which have been described.

The information about the achievement and ability of the children was given special attention. A study of the structure of the classes considered in this study revealed such limited ranges in chronological age and length of time in school that no consideration is given to these two factors as they are related to intraclass groups.

The teacher of Class I-1 had organized intraclass groups for instruction in arithmetic. These groups varied in size with six children in Group 1, twenty-three children in Group 2, and only three children in Group 3.

The Metropolitan Readiness Tests had been given in October, 1950, to four of the children in Group 1, to nineteen of the children in Group 2, and to all three children in Group 3. The average percentile ranks for the three groups varied markedly. The average percentile ranks were 85.4 for Group 1, 72.8 for Group 2, and 55.0 for Group 3. Both the lowest and highest percentile ranks for all children were recorded for children in Group 2. Group 1 had a range in percentile ranks from sixty-one to ninety-three, Group 2 had a range in percentile ranks from thirty-three to ninety-nine, and Group 3 had a range in percentile ranks from thirty-nine to sixty-eight. The overlapping of percentile ranks on these readiness tests of members of the different groups is probably the most striking fact revealed by the test scores. An examination of the recorded letter ratings on the arithmetic readiness test

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* In order to avoid unnecessary confusion, the designation "Group 1" is used to refer to the most advanced group in achievement in all intraclass groupings studied. Other groups are given consecutive numbers in order of their relative achievement. Such designations were not used by the classroom teachers, but are employed here for clarity and convenience.

also indicated that the members of any one of the arithmetic groups had varied in their readiness for arithmetic instruction in October, 1950.

The Metropolitan Achievement Tests, Primary 1, Battery, Form T were given to 17 children in Group 2 and to all children in Group 1 and Group 3 in May, 1951. Three children were absent when the test was given. The mean average achievement ages for the groups ranged from 81.0 months for Group 3 to 95.2 months for Group 1. The mean arithmetic ages varied from 75.0 months for Group 3 to 100.8 months for Group 1. It will be noted that the range in arithmetic achievement for the class is nearly two and one half times as great as the range in average achievement. All three arithmetic groups had the same relatively greater range in arithmetic achievement than in general achievement. There was a wide overlapping in arithmetic achivement among members of Group 1 and Group 2, but the three lowest arithmetic ages were recorded for the three children in Group 3.

TABLE V

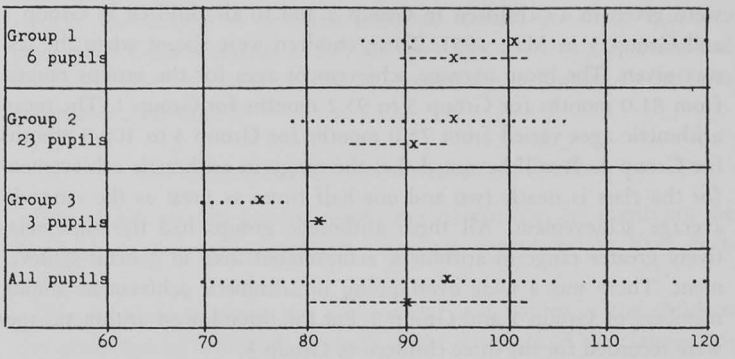
Distribution of Readiness and Achievement Test Results, Arithmetic Groups, Class I-1

	Number of Pupils	Total Readiness Percentile Ranks October, 1950	Achievement Ages May, 1951	
			Numbers	Average Achievement
All Pupils	32			
Average		73.2	94.2	90.2
Range		33–99	69–120	80–102
Arithmetic Group 1	6			
Average		85.4	100.8	95.2
Range		61–93	85–120	89–102
Group 2	23			
Average		72.8	95.1	90.1
Range		33–99	78–106	84–94
Group 3	3			
Average		55.0	75.0	81.0
Range		39–68	69–78	80–82

Table V summarizes the results of readiness and achievement tests for the arithmetic groups, Class I-1, and Chart 2 gives a graphic summary of the achievement test results for the same groups.

CHART 2

DISTRIBUTION OF ACHIEVEMENT TEST RESULTS,
ARITHMETIC GROUPS, CLASS I-1



THE STRUCTURE OF THE READING-SOCIAL STUDIES GROUPS

The four reading-social studies groups were of approximately the same size with seven, eight, or nine children in each group.

Seven of the children in Group 1, six in Group 2, eight in Group 3, and six in Group 4 had taken the Metropolitan Readiness Tests in October, 1950. Group 1 and Group 2 each had readiness percentile ranks recorded which varied from sixty-six to ninety-nine with averages of 86.4 and 85.5 respectively. Group 3 and Group 4 had average readiness percentile ranks which were close together, 60.4 and 62.5 respectively, but the range was thirty-three through ninety-three for Group 3 and sixty-nine through eighty-six for Group 4. The recorded letter ratings on the reading readiness test also indicated a range in reading readiness for the members of all reading groups. The overlapping of scores on the readiness tests of members of the different groups is the most striking fact revealed by the test results. Results of the readiness tests for the reading-social studies groups are given in Table VI

The Metropolitan Achievement Tests, Primary 1, Battery, Form T were given to eight children in Group 1, eight in Group 2, seven in Group 3, and six in Group 4 in May, 1951. Three children were absent when the tests were administered. The mean average achievement ranged from 84.3 months for Group 4 to 93.5 months for Group 1.

TABLE VI

Distribution of Readiness and Achievement Test Results, Reading-Social Studies Groups, Class I-1

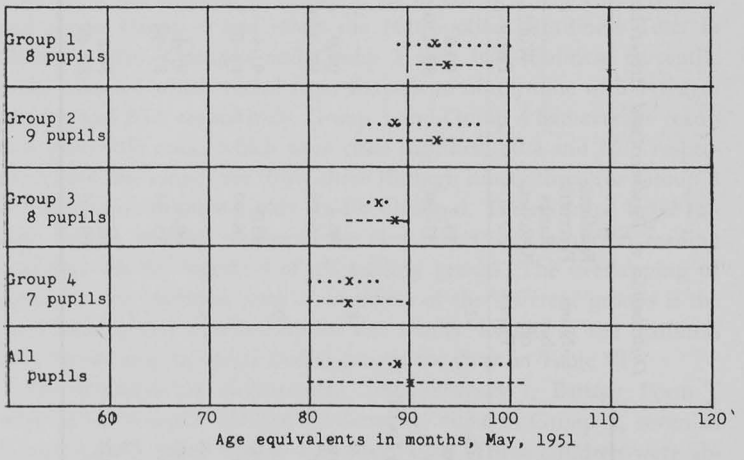
	Number of Pupils	Readiness Percentile Ranks October, 1950	Achievement Ages, May, 1951				
			Word Pictures	Word Recognition	Word Meaning	Average Reading	Average Achievement
All Pupils	32						
Average		73.2	90.8	90.3	84.7	88.5	90.2
Range		33–99	82–110	82–110	77–98	80–100	80–102
Reading-Social Studies							
Group 1	8						
Average		86.4	94.9	94.9	89.1	92.9	93.5
Range		66–99	89–110	90–110	84–94	89–100	91–99
Group 2	9						
Average		85.5	91.4	90.5	86.4	89.4	92.5
Range		66–99	88–97	87–95	83–98	86–97	85–102
Group 3	8						
Average		60.4	89.4	89.1	81.9	86.7	88.7
Range		33–93	87–94	88–91	79–85	86–88	84–90
Group 4	7						
Average		62.5	86.2	85.3	80.0	83.7	84.3
Range		69–86	82–89	82–89	77–85	80–87	80–90

The average achievement was 88.7 months for Group 3 and 92.5 months for Group 2. The mean achievement in average reading varied from 83.7 months for Group 4 to 92.9 months for Group 1. Scores on word pictures, word recognition, and word meaning tests showed corresponding differences in averages.

A superficial examination of the means of average achievement ages and average reading ages for the four groups might appear to indicate four distinct achievement levels with approximately three months differences in the reading ages of successive groups. An examination of the ranges in achievement for the groups clearly disputes such an interpretation, for great overlapping in the achievement of members of different groups existed. There was overlapping in specific skills as well as in average achievement. Specific examples of this overlapping are: (1) A child in Group 4 had a higher average reading age than one child in Group 2. (2) The highest average achievement age was recorded for a child in Group 2, not for a child in Group 1. (3) There was a recorded difference of twenty months in word recognition ages for children in Group 1, but there was a difference of only 9.6 months in the average

CHART 3

DISTRIBUTION OF ACHIEVEMENT TEST RESULTS, READING-SOCIAL STUDIES GROUPS, CLASS I-1



---- range in average achievement.
.... range in average reading achievement.
x indicates means for groups.

word recognition ages for Groups 1 and 4. (4) Group 3 had an average word picture test age of 89.4 months as contrasted with an average word meaning test age of 81.9 months. (5) A girl in the class had recorded for her a word recognition test age of 110 months and a word meaning test age of ninety-two months. Other examples could be given.

The heterogeneity of the intraclass groups for reading-social studies instruction is definitely indicated by the school records.

Table VI summarizes the achievement ages for the reading-social studies group in Class I-1, and Chart 3 present some of the same information in graphic form.

SUMMARY

The purpose of Chapter VI was: (1) to present a study of the structure of Class I-1 as revealed through the results of the Metropolitan Readiness Tests given in October, 1950, and the Metropolitan Achievement Tests given in May, 1951, (2) to show the composition of the intraclass groups for instruction in reading-social studies and arithmetic in terms of the same test results, and (3) to describe the bases upon which the teacher of Class I-1 had organized intraclass groups.

There were thirty-two children, seventeen boys and fifteen girls in Class I-1 on May 1, 1951. The chronological ages of the children in the class at that time ranged from six years eight months to seven years eight months. Readiness test results indicated a wide range in readiness for arithmetic and reading instruction in this class in October, 1950. The results of the achievement tests showed a range in average achievement ages from eighty to 102 months, with a mean average achievement age of 90.2 months, in May, 1951.

The teacher of Class I-1 had organized four intraclass groups for instruction in reading-social studies and three for instruction in arithmetic. These groups had been set up primarily on the basis of achievement, but it had been necessary to take into consideration many other factors, especially social and emotional needs of children.

The results of the readiness and achievement tests pointed to four intraclass reading groups which represented four progressive levels of ability and achievement and three intraclass arithmetic groups which represented three progressive levels of ability and achievement. A close examination of the test results revealed that these different levels of

ability and achievement existed only in trms of mean ability and achievement of the groups, for the ranges in ability and achievement for the reading-social studies and for the arithmetic groups showed considerable overlapping between the groups in terms of both ability and achievement. The school records clearly indicated the hetrogeneous nature of all the intraclass groups which had been organized.

CHAPTER VII

The Organization and Structure of Intraclass Groups in Class III-2

The purpose of this chapter is to present interview, statistical, and sociometric information which serves to clarify the structure of Class III-2, the bases for organization of intraclass groups in the class, and the structure of the intraclass groups organized.

THE STRUCTURE OF THE CLASS

There were thirty-two children, fourteen boys and eighteen girls, in Class III-2 on May 1, 1951. These children ranged in chronological age from eight years to nine years eleven months. Ten of the thirty-two children had attended schools other than the Austin Public Schools, and for this reason the records of all these children were not complete. Four of the ten children, one boy and three girls, had attended private schools a year before they would have been eligible chronologically to enter the public schools. Six children, two boys and four girls, had attended schools in other cities. A close examination of the records indicated that only one child in the class, a boy who transferred from out of town, could have entered the Austin Public Schools before September, 1948, the date of initial entrance to school for all children in this class. The records indicated that no child had repeated a grade and that there had been no double promotions. Table VII gives a summary of the chronological ages of these children.

TABLE VII

Distribution of Chronological Ages, Class III-2

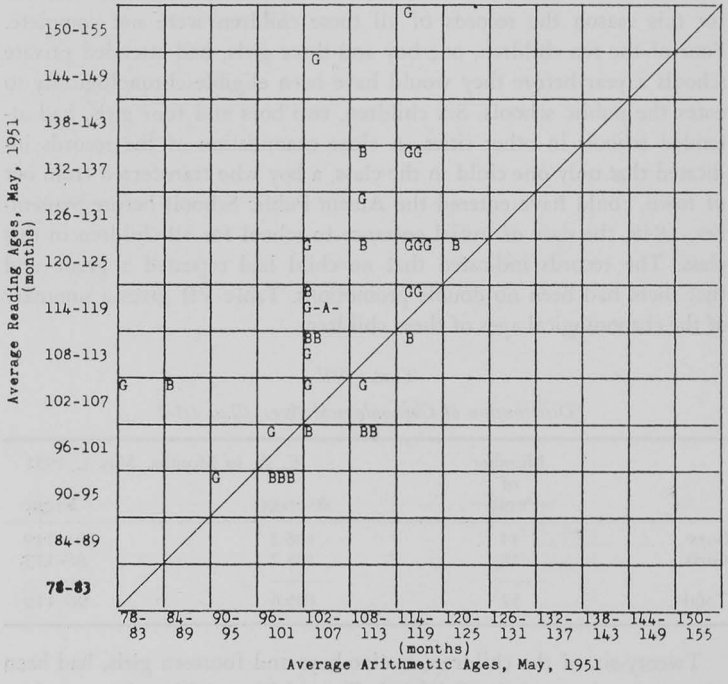
	Number of Pupils	C. A. in Months, May 1, 1951	
		Average	Range
Boys	14	106.2	101–119
Girls	18	105.2	86–113
Total	32	105.6	96–119

Twenty-six of the children, twelve boys and fourteen girls, had been given some form of the California Test of Mental Maturity at various

times. Six children had not taken the tests. Absences probably account for this fact since test results were available for all children who transferred into the Austin Public Schools from other schools. The recorded total I.Q.'s ranged from seventy-seven to 146. The I.Q. of seventy-seven was recorded for the oldest boy in the class. It is probable that his lack of general maturity was the reason he was not enrolled in school a year earlier than he was. Utilizing chronological ages as of May 1, 1951, and the recorded I.Q.'s for the twenty-six children who had taken the intelligence test, mental ages as of May 1, 1951, were determined. These mental ages ranged from ninety-two months to 142 months. The range in mental age for the boys was forty-eight months, from ninety-two months to 140 months, while the range in mental age for the girls was thirty-two months, from 110 months to 142 months. The average total mental age for the twenty-six children was 121.9

CHART 4

THE RELATIONSHIP BETWEEN ACHIEVEMENT IN READING AND ARITHMETIC, CLASS III-2



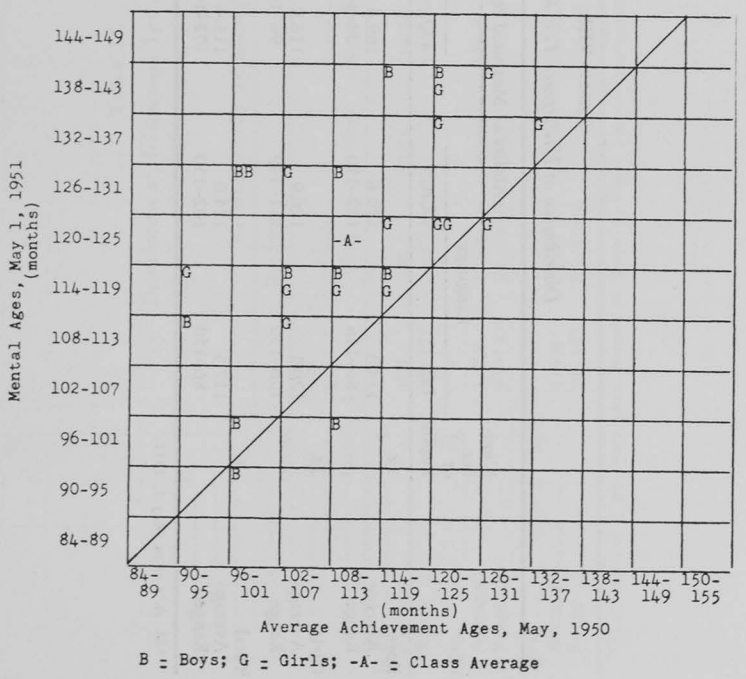
months with an average total mental age of 117.9 months for the boys and 125.3 months for the girls. The average language mental age of the class was 124.0 months as compared to an average non-language age of 119.8 months. The results of the California Test of Mental Maturity are summarized in Table VIII.

In May, 1951, the mean average achievement age as indicated by results of the Metropolitan Achievement Tests, Elementary Battery, Form T was 110.2 months for the thirty-two children in the class. The average total achievement of the girls was 114.2 months as compared to 104.9 months for the boys. The achievement of the class as indicated by the separate tests is rather consistent. This information is presented in Table IX.

Chart 4 indicates the relationship between achievement in reading and arithmetic in this class. Chart 5 indicates the relationship between

CHART 5

THE RELATIONSHIP BETWEEN MENTAL AGES
AND AVERAGE ACHIEVEMENT AGES, CLASS III-2



B = Boys; G = Girls; -A- = Class Average

TABLE VIII

Distribution of Intelligence Test Results, Class III-2

	Number of Pupils	Ability as Measured by the California Test of Mental Maturity					
		Language		Non-Language		Total	
		I.Q.	M.A.*	I.Q.	M.A.*	I.Q.	M.A.*
Boys	12						
Average		114.3	120.6	109.4	115.6	111.7	117.9
Range		86–146	102–150	72–140	86–141	77–138	92–140
Girls	14						
Average		120.1	126.9	116.8	123.4	118.7	125.3
Range		106–150	111–149	96–144	99–139	107–146	110–142
Total	26						
Average		117.5	124.0	113.4	119.8	115.5	121.9
Range		86–150	102–150	72–144	86–141	77–146	92–142

*M. A.'s as of May 1, 1951.

TABLE IX

Distribution of Achievement Test Results, Class III-2

	Number of Pupils	Achievement Ages, May, 1951 As Measured by the Metropolitan Achievement Tests, Elementary Battery								
		Reading			Arithmetic					
		Reading I	Vocabulary	Average	Fundamentals	Problems	Average	Language Usage*	Spelling	Average Achievement
Boys	14									
Average		108.7	106.3	107.4	103.9	108.4	105.9	104.1	100.9	104.9
Range		93–133	86–131	91–132	84–116	95–130	89–123	89–121	88–140	93–125
Girls	18									
Average		117.8	121.8	119.6	106.8	110.9	108.6	117.9	111.9	114.2
Range		93–147	94–175+	93–152	79–116	86–126	82–119	97–147	88–134	93–137
Total	32									
Average		113.8	115.0	114.2	105.6	109.8	107.4	112.2	107.1	110.2
Range		93–147	86–175+	91–152	79–116	86–126	82–123	89–147	88–140	93–137

*Two boys and 1 girl were given Primary II, Form T, which has no language usage part. Figures in this column are for 12 boys, 17 girls only.

average achievement and average mental maturity. These charts point to the complexity of the class structure.

In May, 1951, children in Class III-2 were given the sociometric test which has been described in Chapter V. Thirty-one of the children indicated their choices of classmates to work with in reading, arithmetic, and social studies groups. One girl was absent at the time of the test. Although these tests were given primarily to help in the evaluation of children's attitudes toward intraclass grouping, they serve to give information about the structure of the classes.

Sociograms and detailed tabulations of sociometric choices are presented later in this chapter. At this point the information is summarized to further clarify the structure of the class. The sociometric choices of the children are presented in a condensed form in Table X. This table gives (1) the number of choices of group associates that each child was realizing through his placement in existing intraclass groups and (2) the number of times each child was named as a choice for a working-group associate by his classmates. For purposes of clarifying this table, attention is directed to the specific information given for three children:

(1) The information in the successive columns following G8 indicates that Girl 8 (a) worked with two children of her choice in an arithmetic group, (b) worked with one child of her choice in a reading group, (c) worked with one child of her choice in a social studies group, (d) realized a total of four of her nine choices for group-work associates and (e) was not chosen by any child as a working-group associate.

(2) The information in the columns from left to right following G15 indicates that Girl 15 (a) was not working with any one of her nine choices for arithmetic, reading, or social studies associates, (b) was chosen as an arithmetic-group associate by one child whom she chose as an arithmetic-group associate, (c) was chosen as an arithmetic-group associate by three children whom she did not choose as arithmetic-group associates, (d) was chosen as a reading-group associate by three children whom she chose as reading-group associates, (e) was chosen as a reading group associate by three children whom she did not choose as reading-group associates, (f) was chosen as a social studies-group associate by one child whom she chose as a social studies-group associate, (g) was chosen by three children as a social studies-group associate whom she did not choose as social studies-group associates, (h) had received a total of five mutual choices for group membership, (i) had received a total of nine one-way choices for group membership, and (j) had received a total of fourteen mutual and one-way choices.

TABLE X

Summary of Sociometric Choices, Class III-2

Pupil	Number of Choices Realized in Groups				Number of Times Chosen for Groups								
					Arithmetic		Reading		Social Studies		Total		
	Arithmetic	Reading	Social Studies	Total	M*	O*	M	O	M	O	M	O	T
B1	2		1	3				2		3		5	5
B2	2			2	1	2	2	3		1	3	6	9
B3	3	1	2	6	3	1	2	2	1	4	6	7	13
B4	2	2		4	1	1				2	1	3	4
B5	1			1	1	3	1	2	1	1	3	6	9
B6	3			3		1		2				3	3
B7	2			2	1	1					1	1	2
B8	3			3	1	3	1	4		7	2	14	16
B9		1	1	2		2		1		3		6	6
B10	1	1		2		3	1	4	1		2	7	9
B11	2	2		4	1	1	2	3	1	3	4	7	11
B12	3	1	1	5			3	3	2	4	6	10	16
B13	2	1		3	1	1	1			2	2	3	5
B14	1		1	2	1	6	3	3		7	4	16	20
G1	3		1	4			1	1		1	1	2	3
G2	1	2	2	5	2	1	3	3	2		7	4	11
G3			1	1	1	4	1		2	1	4	5	9
G4	1	2	1	4	1		1			2	2	2	4
G5	2			2		3		2		2		7	7
G6	1	1	2	4				1		3		4	4
G7				0		3		1		2		6	6
G8	2	1	1	4									0
G9	1		1	2	1	1		2		4	1	7	8
G10	2	2		4	1	4		2	1	2	2	8	10
G11	2			2	1	1	2	2		3	3	6	9
G12	1	1	1	3	3		3	1	3	2	9	3	12
G13	1		1	2	3	3	2	5	1	3	6	11	17
G14	2	1	1	4	1		2	1	1		4	1	5
G15				0	1	3	3	3	1	3	5	9	14
G16	2	1	1	4	3	4	1		1	2	5	6	11
G17	Absent					3		1		3		7	7
G18	2	1	1	4	2	3	3	1	2	3	7	7	14
Totals	50	21	20	91	32	61	38	55	20	73	90	189	279

*M —Mutual Choice.
*O — One-way Choice.

(3) The information in the columns from left to right following B4 indicates that Boy 4 (a) worked with two children of his choice in an arithmetic group, (b) worked with two children of his choice in the reading group, (c) realized a total of four of his nine choices for group-work associates, (d) was chosen by one child whom he chose as an arithmetic-group associate, (e) was chosen by one child whom he did not choose as an arithmetic-group associate, (f) was chosen by two children as a social studies-group associate whom he did not choose as social studies-group associates, (g) received a total of one mutual choice for group membership, (h) received a total of three one-way choices for group membership, and (i) received a total of four mutual and one-way choices.

The results of this test would indicate a wide range of social relations within this class. Only one child, a girl, was an isolate as indicated by the test, and only three children were chosen only two or three times.

It is difficult to determine what children should be considered stars. However, it would appear reasonable to consider any child a star who received twice the number of choices he might be expected to receive by chance, in this case twice nine. Using this criterion, only one boy who received twenty choices could have been considered a star.

Approximately one-third of the choices were mutual choices. There was no tendency for groups to break off from the class as a whole. The children actually realized nearly a third of their choices as they worked in the existing groups. In this class with three semi-permanent groupings, it would have been possible for a child to work with all nine children of his choice, but six was the greatest number of choices realized. The isolate was fortunate to have been in groups with four of the children of her choice. The three children chosen only two or three times were all working with two or more children of their choice.

The Intraclass Groups

The teacher of Class III-2 employed intraclass grouping for instructional purposes in both reading and arithmetic. She had organized five reading groups and three arithmetic groups.

The work in reading and social studies is so highly integrated that grouping for reading instruction is also basically grouping for social studies instruction. This teacher had not established any semipermanent groups for physical education activities. She stated that frequent occasions arose when it was necessary to establish temporary groups, especially during the activity period.

Bases for Grouping

The teacher of Class III-2 attempted to set up her reading groups as achievement groups. She studied thoroughly all objective evaluations of their work. This teacher found it desirable to group the children as soon as she began to work with them. Since she did this, it was necessary to depend upon school records as the basis for grouping. Such a procedure made it necessary to make a great many adjustments in grouping, but she preferred such a plan rather than to have the class work as a whole until she had had more classroom contact with the children. As the groups worked together, she made many shifts, some based upon achievement and some based upon other needs of children. She felt that the children must be very carefully watched for personality clashes and dependencies. She also found it desirable to have a balance of boys and girls in each group so far as it was possible.

This teacher also attempted to set up arithmetic groups largely on the basis of achievement in arithmetic. She believed the factor of achievement is more important in setting up arithmetic groups than reading groups. She used results of standardized tests as her primary basis for grouping for instruction in arithmetic.

This teacher made many adjustments in the group placement of children because of their social and emotional needs; for example, she stated that she had been especially careful to watch for personality clashes or dependencies which occasionally develop within a group. She gave a specific example. Julia had been very shy and depended a great deal upon another girl in the class. Her shyness had been intensified because of the death of her father, and after her problem became acute, the teacher brought Julia's close friend from a more advanced reading group into Julia's group. She did not feel that this was unfair to the girl because she had a role of leadership in this group that she had not had with the children reading on her own level. This teacher also stated that it was desirable to have a balance of boys and girls in a group, and at times she made shifts in group membership in order to maintain as much of a balance as possible.

This teacher commented that there were times when a child did not seem to fit into any group well and gave Jimmy as an example. At one time he had been working with Group 2 in arithmetic and was reading in a pre-primer. He had been a definite member of the arithmetic group, but he presented many difficult problems even in the group of the slowest readers.

The Structure of the Arithmetic Groups

The teacher of Class III-2 had organized three groups for instruction in arithmetic. There were six children in Group 1, eighteen children in Group 2, and eight children in Group 3.

The California Test of Mental Maturity had been given to five children in Group 1, to sixteen children in Group 2, and to five children in Group 3. Reasons why other children had not been given the test were not available. The mean mental ages as of May 1, 1951, were 107.6 months for Group 3, 121.9 months for Group 2, and 136.2 months for Group 1. However the ranges of mental ages within all three groups indicated that the three groups did not represent three distinct levels of ability. Table XI summarizes the results of the intelligence tests given the children in the arithmetic groups in Class III-2.

All children in the class had taken the Metropolitan Achievement Tests in May, 1951. The mean average achievement ages for the arithmetic groups were 96.9 months for Group 3, 111.4 months for Group 2, and 124.2 months for Group 1. The ranges in ability indicate considerable overlapping in general achievement between the groups. The mean average arithmetic ages rangd from 96.1 months for Group 3 to 118.5 months for Group 1. Except in the case of Group 1, the results on the tests of arithmetic fundamentals and arithmetic problems indicated consistent achievement in the two areas. Group 1 had an average achievement age of 114.8 months on arithmetic fundamentals and 122.5 months on arithmetic problems. A study of all the achievement tests results reveals considerable overlapping in arithmetic achievement between members of the different arithmetic groups.

Table XI presents the results of the achievement tests given Class III-2. Some of the same information is presented in graphic form in Chart 6.

All children except one girl in Group 2 took the sociometric test which has previously been described. A tabulation of the children's choices for arithmetic-group associates and a numerical summary of these choices are presented in Chart 7. The section of the chart which gives a tabulation of children's choices for arithmetic group associates may be read both vertically and horizontally. Each child's three choices of arithmetic group associates are indicated by placing under this code designation and opposite the code designations of the children whom he chooses the symbols "Ø," "O," "✕" and "M." "Ø" indicates a one-way choice of a child who was working with the chooser in an arithmetic

TABLE XI

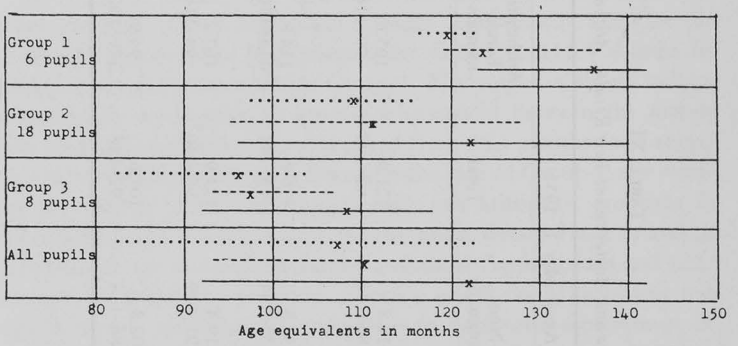
Distribution of Intelligence and Achievement Test Results, Arithmetic Groups, Class III-2

	Number of Pupils	Mental Ages, May 1, 1951			Achievement Ages, May, 1951			
		Language	Non-Language	Total	Arithmetic Fundamentals	Arithmetic Problems	Average Arithmetic	Average Achievement
All								
Pupils	32							
Average		124.0	119.8	121.9	105.6	109.8	107.4	110.2
Range		102–150	86–141	92–142	79–116	86–130	82–123	93–137
Arithmetic Group 1	6							
Average		136.4	137.8	136.2	114.8	122.5	118.5	124.2
Range		116–149	135–141	123–142	113–116	116–130	116–123	119–137
Group 2	18							
Average		123.1	119.4	121.9	107.2	110.8	108.7	111.4
Range		106–150	91–139	96–140	98–114	97–121	97–116	95–128
Group 3	8							
Average		114.4	102.8	107.6	94.9	98.0	96.1	96.9
Range		102–129	86–118	92–118	79–102	86–107	82–104	93–107

group, "O" indicates a one-way choice of a child who was not working with the chooser in an arithmetic group, "Ø" indicates a mutual choice by children working in the same arithmetic group, and "M" indicates a mutaul choice by children not working in the same arithmetic group. An example of the way this chart is read vertically is cited. The "Ø" under G9 and opposite G3 indicates that Girl 9 had chosen Girl 3 who was in her arithmetic group, the "M" under G9 and opposite G13 indicates that Girl 9 and Girl 13 chose one another but did not work in the same arithmetic group, and "O" under G9 and opposite G16 indicates that Girl 9 chose Girl 16 who was not in her arithmetic group.

CHART 6

DISTRIBUTION OF ABILITY AND ACHIEVEMENT TEST RESULTS, ARITHMETIC GROUPS, CLASS III-2



____ range in total mental ages. .... range in average arithmetic ages.
---- range in average achievement ages. x indicates means.

The section of the chart which gives the tabulation of children's choice's may also be read horizontally to determine the number of times each child was chosen and the identity of the children who chose him. An example of the way this section of the chart is read horizontally is cited. The "O" opposite G18 and under G2 indicates that Girl 18 was chosen by Girl 2 who was not in the same arithmetic group, the "M" opposite G18 and under G12 indicates that Girl 18 and Girl 12 chose one another as arithmetic-group associates but were not in the same arithmetic group, the "Ø" opposite G18 and under G14 indicates that Girl 18 was chosen by Girl 14 who was in her arithmetic group, the "Ø" opposite G18 and under G16 indicates that these two girls

chose one another as arithmetic-group associates and were in the same arithmetic group, and the "O" opposite G18 and under G15 indicates that Girl 18 was chosen by Girl 15 who was not in the same arithmetic group.

CHART 7

TABULATION OF CHOICES FOR ARITHMETIC GROUP ASSOCIATES, CLASS III - 2

Tabulation of Choices

Pupils Choosing Arithmetic Group Associates, Arranged by Existing Groups

Group 1: B 9, G 2, G 3, G 6, G 9, G 12

Group 2: B 1, B 2, B 3, B 4, B 7, B 8, B 12, B 14, G 1, G 4, G 5, G 10, G 11, G 13, G 14, G 16, G 17, G 18

Group 3: B 5, B 6, B 10, B 11, B 13, G 7, G 8, G 15

Pupils Chosen for Arithmetic Group Associates

Numerical Summary of Choices

	Number of Choices Received				
	Mutual		One-way		Total
	M	M	Ø	O	
B 9				2	2
G 2	1	1		1	3
G 3		1	2	2	5
G 6					0
G 9		1		1	2
G 12	1	2			3
B 1					0
B 2	1		2		3
B 3	3		1		4
B 4	1			1	2
B 7		1	1		2
B 8	1			3	4
B 12	1		2	1	4
B 14	1		3	3	7
G 1					0
G 4	1				1
G 5			3		3
G 10	1		1	3	5
G 11	1			1	2
G 13	1	2	2	1	6
G 14	1				1
G 16	2	1	2	2	7
G 17			1	2	3
G 18	1	1	1	2	5
B 5	1		3		4
B 6				1	1
B 10			2	1	3
B 11	1		1		2
B 13		1		1	2
G 7			2	1	3
G 8					0
G 15		1	1	2	4
Total	20	12	30	31	93

*Pupil absent at time of test.
Ø - One-way choice, pupils in one group.
O - One-way choice, pupils in different groups.
M - Mutual choice, pupils in one group.
M - Mutual choice, pupils in different groups.

The section of the chart which presents a numerical summary of the children's choices is to be read horizontally. Opposite each child's code designation and in successive columns from left to right are placed the number of mutual choices he received from children in his arithmetic group, the number of mutual choices he received from children not in his arithmetic group, the number of one-way choices he received from children in his arithmetic group, the number of one-way choices he received from children not in his arithmetic group, and the total number

of choices he received. An example of the way this section of the chart is read is cited. The numbers and blank space opposite G2 of Group 1 indicate that Girl 2 received one mutual choice from a child in her arithmetic group, one mutual choice from a child not in her arithmetic group, no one-way choice from a child in her arithmetic group, one one-way choice from a child not in her arithmetic group, and a total of three choices.

The children's choices of arithmetic group associates are also reported in Figure 1 in the form of a sociogram. This sociogram, which

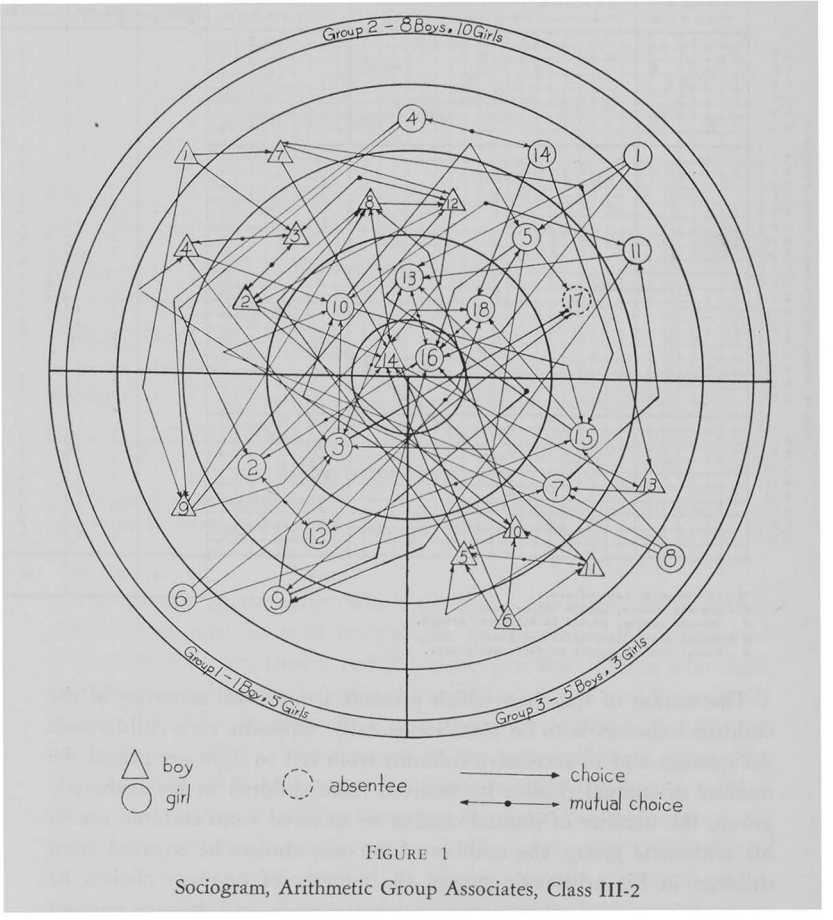


FIGURE 1

Sociogram, Arithmetic Group Associates, Class III-2

utilizes lines and arrows to indicate the choices of children, is in the form of five concentric circles divided into three sectors. Each circle represents a given number of choices, and each sector represents an arithmetic group. The triangles and circles representing the boys and girls in the class are placed in the sociogram in such a way as to show the number of choices each child received and the placement of children in arithmetic groups. The first or outer circle represents no choices at all, the second circle represents one or two choices, the third circle represents three or four choices, the fourth circle represents five or six choices, and the inner circle represents seven or more choices. Each sector is labeled to represent one of the three arithmetic groups. This form of the sociogram has the advantage of making it very easy for the reader to tell a great deal about a class. Some examples of the facts that one readily discovers by looking at Figure 1 are: (1) The two children, a boy and a girl, who received the greatest number of choices were both in Group 2. (2) Not a single child in Group 3 received more than four choices. (3) Group 2 is much larger than the other two groups. (4) There were four isolates in the class, one boy and three girls.

An examination of this information indicates that most of the children were working in arithmetic groups with one or more children whom they most desired as group associates and that domination by a few highly chosen children did not exist.

There were four isolates, one in Group 1, two in Group 2, and one in Group 3. Apparently the achievement level of the groups was not an important factor in developing isolates. Two children, a boy and a girl in Group 2, might be considered stars, for each received seven choices or more than twice the three choices they might be expected to receive by chance.

Approximately one-third of the choices were mutual choices. Fifty of the children's ninety-three choices were actually realized through placement in existing arithmetic groups. Each of the four isolates was working with at least one child of his choice. Four children, two in Group 1 and two in Group 3, were not working with at least one child of their choice. The larger number of children in Group 2 probably explains why at least one choice was realized by all children in this group. However it is possible to raise the question as to whether or not working with children of one's choice would be as satisfying in a group as large as Group 2 as in smaller groups.

The Structure of the Reading-Social Studies Groups

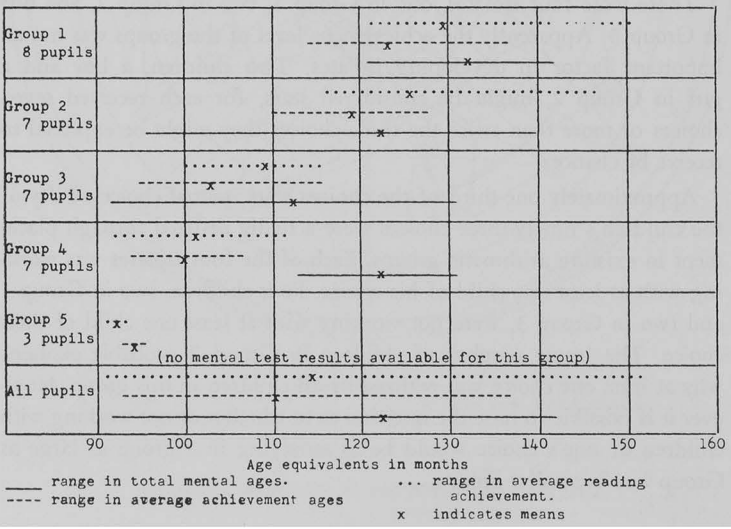
Five reading-social studies groups had been organized in Class III-2. There were eight children in Group 1, three children in Group 5, and seven children in each of the other three groups.

The California Test of Mental Maturity had been given to seven children in Group 1, six children in Group 2, seven children in Group 3, and six children in Group 4. No child in Group 5 had taken the test. The average mental ages for the groups as measured by this test were 122.0 months for Group 4, 111.9 months for Group 3, 122.0 months for Group 2, and 131.7 months for Group 1. Group 2 showed the largest range in mental ages, from ninety-six to 140 months, and Group 4 had the most limited range in mental age, from 113 to 131 months. Table XII presents the results of the intelligence tests given members of the reading-social studies groups in Class III-2.

All children in the class had taken the Metropolitan Achievement Tests in May, 1951. The mean average achievement ages recorded for the groups were 93.7 months for Group 5, 100.4 months for Group 4, 103.4 months for Group 3, 119.0 months for Group 2, and 123.0

CHART 8

DISTRIBUTION OF INTELLIGENCE AND ACHIEVEMENT TEST RESULTS, READING-SOCIAL STUDIES GROUPS, CLASS III-2



months for Group 1. The corresponding mean average reading ages were 92.0 months, 100.9 months, 109.3 months, 124.9 months, and 129.3 months. The test indicates rather consistent performance on the three separate reading sections of the test. The most striking facts revealed by the achievement test results are the heterogeneity in terms of reading and average achievement of the intraclass groups and the overlapping in achievement between members of different groups. Table XII summarizes the results of the achievvement tests given Class III-2. Chart 8 gives a graphic presentation of some of the information included in Table XII.

All children except one girl in Group 1 took the sociometric test which was described in Chapter V. Since the teacher of Class III-2 worked with the same grouping for instruction in reading and social

CHART 9

TABULATION OF CHOICES FOR READING GROUP ASSOCIATES, CLASS III-2

Tabulation of Choices
Pupils Choosing Reading Group Associates, Arranged by Existing Groups

Group 1: 2 3 4 6 9 12 16 17
Group 2: 8 9 11 14 15 18 20
Group 3: 1 6 8 13 18 19 21
Group 4: 2 5 10 13 15
Group 5: 7 11 *

Pupils Chosen for Reading Group Associates

	Group 1								Group 2							Group 3							Group 4					Group 5			Numerical Summary of Choices: Number of Choices Received				
	2	3	4	6	9	12	16	17	8	9	11	14	15	18	20	1	6	8	13	18	19	21	2	5	10	13	15	7	11	*	Mutual ✖	Mutual ✖	One-way ø	One-way O	Total
G 2		ø			✖	✖					O		✖					O													2	1	1	2	6
G 3																									✖							1			1
G 4											✖																					1			1
G 6																		O															1	1
G 9		ø									O																						1	1	2
G 12	✖										✖														O	✖					1	2		1	4
G 16	✖																														1				1
G 17			ø																														1		1
B 3										✖													✖	O					O		1	1		2	4
B 9																		O																1	1
B 12										✖						O		O		O			✖		✖						1	2		3	6
B 14											ø						O	✖	✖					O					✖			3	1	2	6
G 5		O																		O														2	2
G 14		✖	O										✖																		1	1		1	3
G 18	✖				✖	O							✖																		1	2		1	4
B 1																		ø											O				1	1	2
B 6																ø				ø													2		2
B 8										O	✖					ø								O	O							1	1	3	5
B 13											✖																					1			1
G 1											O															✖						1		1	2
G 8																																			0
G 11																										O	✖	✖		O		2		2	4
B 2										✖	✖							O					ø						O			2	1	2	5
B 4																																			0
B 5																O								ø					✖		1	1	1	3
B 10			O							O	✖												ø						O		1	1	3	5
G 10		O																												O				2	2
G 13		✖		O	O						O									O	✖				ø						2	1	4	7
G 15			O	✖															✖	✖						ø				O		3	1	2	6
B 7																																			0
B 11											O	✖						O					O	✖								2		3	5
G 7			O																															1	1
Total																															8	30	13	42	93

*Pupil absent at time of test.
ø - One-way choice, pupils in one group.
O - One-way choice, pupils in different groups.
✖ - Mutual choice, pupils in one group.
✖ - Mutual choice, pupils in different groups.

TABLE XII

Distribution of Intelligence and Achievement Test Results, Reading-Social Studies Groups, Class III-2

	Number of Pupils	Mental Ages, May 1, 1951			Achievement Ages, May, 1951			
		Language	Non-Language	Total	Reading 1	Vocabulary	Average Reading	Average Achievement
All Pupils	32							
Average		124.0	119.8	121.9	113.8	115.0	114.2	110.2
Range		102–150	86–141	92–142	93–147	86–175+	91–152	93–137
Reading-Social Studies								
Group 1	8							
Average		133.9	130.7	131.7	125.9	133.1	129.3	123.0
Range		116–149	117–139	121–142	114–143	124–175+	121–152	114–137
Group 2	7							
Average		126.8	117.7	122.0	124.1	125.7	124.9	119.0
Range		106–150	91–141	96–140	109–147	113–147	116–147	110–128
Group 3	7							
Average		117.7	106.6	111.9	109.3	109.9	109.3	103.4
Range		102–139	86–121	92–131	102–114	98–120	100–116	95–111
Group 4	7							
Average		117.0	124.5	122.0	103.1	98.9	100.9	100.4
Range		108–129	101–139	113–131	98–112	86–114	92–113	94–107
Group 5	3							
Average		—*	—*	—*	93.3	91.3	92.0	93.7
Range					93–94	89–94	91–93	93–95

*No test results available.

studies, the test furnished two sets of data clarifying the social dynamics within the reading-social studies groups. A tabulation of children's choices for reading group associates and a numerical summary of these choices are given in Chart 9. Figure 2 is a sociogram giving the same information. Chart 10 and Figure 3 give parallel information about children's choices of social studies group associates. Charts 9 and 10 are similar to Chart 7 which has been explained in detail, and Figures 2 and 3 are similar to Figure 1 which has also been explained.

A study of these charts and figures clarifies the social relations existing in the reading-social studies group in Class III-2. Only one child,

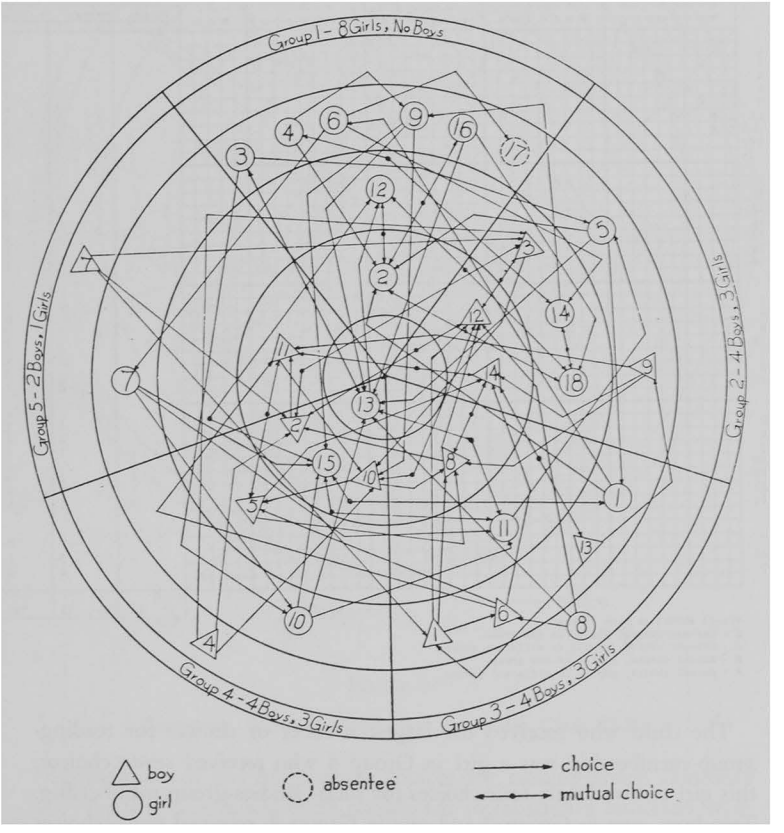


FIGURE 2

Sociogram, Reading Group Associates, Class III-2

a boy in Group 5, was not chosen at least one time as an associate for either reading or social studies activities. A boy in Group 3 was chosen twice as a reading-group associate but not at all for social studies On the other hand, a boy in Group 4 who was not chosen as a reading associate was chosen twice as a social studies-group associate.

CHART 10

TABULATION OF CHOICES FOR SOCIAL STUDIES GROUP ASSOCIATES, CLASS III-2

Tabulation of Choices

Pupils Choosing Social Studies Group Associates, Arranged by Existing Groups

Pupils Chosen for Social Studies Group Associates	Group 1							Group 2							Group 3							Group 4							Group 5							Numerical Summary of Choices: Number of Choices Received — Mutual M	Mutual M	One-way Ø	One-way O	Total
	G 2	G 3	G 4	G 6	G 9	G 12	G 16	G 17	B 3	B 9	B 12	B 14	G 5	G 14	G 18	B 1	B 6	B 8	B 13	G 1	G 8	G 11	B 2	B 4	B 5	B 10	G 10	G 13	G 15	B 7	B 11	G 7						
G 2			M	M																														2				2
G 3																							M	M											2			3
G 4		Ø										O																								1	1	2
G 6			Ø														O	O																		1	2	3
G 9	Ø									O	O								O																	1	3	4
G 12	M		Ø									M													M									1	2	1	1	5
G 16	M																																	1		2	1	3
G 17			Ø								O																					O				1	2	3
B 3									Ø	M													O	O	O									1		1	3	5
B 9										Ø													O													1	2	3
B 12									M			O	O	O										O	M									1	1		4	6
B 14		O							Ø				O	O											O							O	O			1	6	7
G 5				O											O																						2	2
G 14												M																						1				1
G 18	O		M	O								M											O											1	1		3	5
B 1										O								Ø					O													1	2	3
B 6																																						0
B 8									O	O						Ø		Ø					O	O							O					2	5	7
B 13		O																													O						2	2
G 1																																					1	1
G 8																																					3	3
G 11		O								O												O																0
B 2																	O																			1	1	1
B 4										O							O																			2	2	2
B 5																	O														M				1	1	2
B 10										M																									1			1
G 10	M																												Ø		O				1	1	3
G 13	M		O								O																								1	3	4
G 15			M								O	O																			O				1	3	4
B 7																																						0
B 11												O												O	M									1		3	4
G 7		O													O																					2	2
Total																																		8	12	12	61	*93

*Pupil absent at time of test.
Ø - One-way choice, pupils in one group.
O - One-way choice, pupils in different groups.
M - Mutual choice, pupils in one group.
M - Mutual choice, pupils in different groups.

The child who received the largest number of choices for reading-group membership was a girl in Group 4 who received seven choices; this girl received only four choices for social studies-group membership. Two boys, one in Group 2 and one in Group 3, received seven choices each for social studies-work associates. The boy in Group 2 received six choices for reading-group membership, giving him the greatest num-

ber of choices for membership in both groups. The boy in Group 3 referred to above received five choices as a reading-group associate. Certainly there would appear to be no domination of these groups by a few stars.

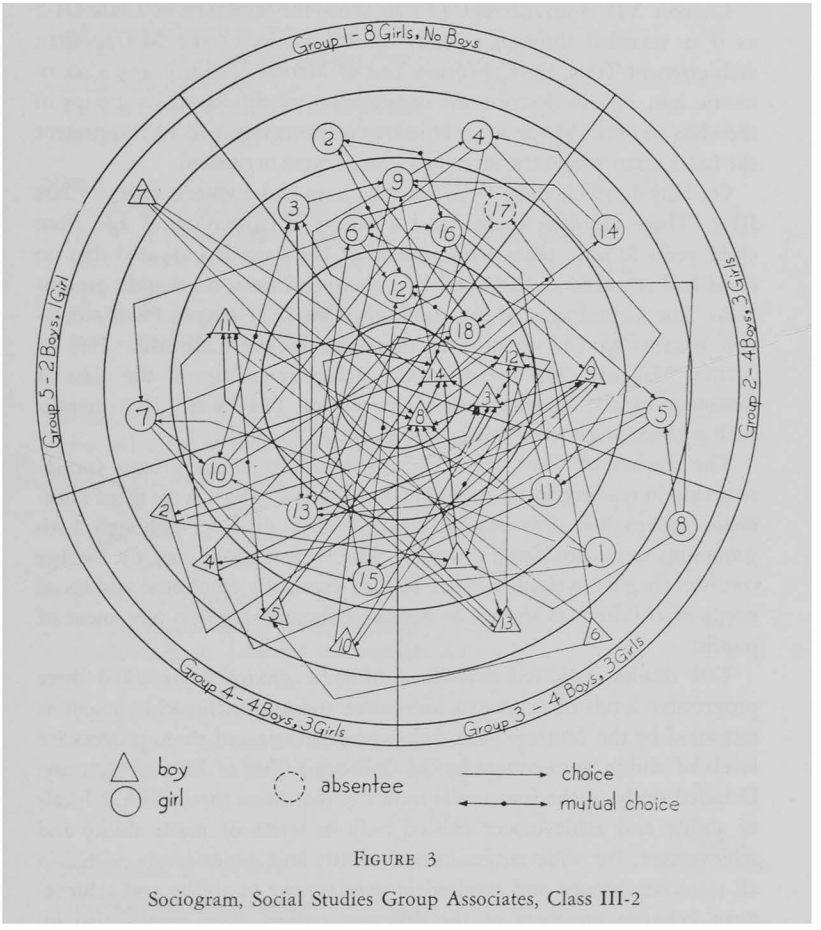


FIGURE 3

Sociogram, Social Studies Group Associates, Class III-2

Twenty-one of the ninety-three choices for reading-group associates and twenty of the ninety-three choices for social studies associates were actually realized through placement in the existing groups. Thirty-eight of the choices for reading-group associates and only twenty of the choices for social studies-group associates were mutual choices. It is

unfortunate that no child in Group 5 was working with a child of his choice for either reading or social studies activities.

SUMMARY

Chapter VII is an attempt (1) to show the structure of Class III-2 as it is revealed through a study of the results of the Metropolitan Achievement Tests, the California Test of Mental Maturity, and a sociometric test, (2) to describe the organization of the intraclass groups in the class in terms of the same objective information, and (3) to present the bases upon which the intraclass groups were organized.

On May 1, 1951, there were fourteen boys and eighteen girls in Class III-2. These children represented a range in chronological age from eight years to nine years eleven months. The records indicated that no child had repeated a grade and that there had been no double promotions. The mental ages of the children in the class ranged from ninety-two months to 142 months as measured by the California Test of Mental Maturity. The mean average achievement age of the class as measured by the Metropolitan Achievement Tests was 110.2 months with a range from ninety-three months to 137 months.

The teacher of Class III-2 had organized intraclass groups for instruction in reading-social studies and arithmetic. There were three arithmetic groups and five reading-social studies groups. Although both groupings were considered primarily achievement groupings, the teacher consistently gave weight to other factors, especially emotional and social needs of children, as she made decisions about the group placement of pupils.

Test results indicated that the arithmetic groups represented three progressive levels of average achievement and arithmetic achievement as measured by the Metropolitan Achievement Tests and three progressive levels of ability as measured by the California Test of Mental Maturity. Detailed study of the test results indicates that these three distinct levels of ability and achievement existed only in terms of mean ability and achievement, for wide ranges in both ability and achievement existed in all intraclass groups and resulted in overlapping in ability and achievement between members of the different groups. Test results also indicated that the reading groups represented different levels of mental maturity and well-defined, progressive levels of mean average achievement and mean average reading achievement and that these five groups also represented wide ranges in ability and achievement with overlapping between the groups.

An interesting overview of the social relations picture in Class III-2 may be gained from the following tabulation of facts:

Isolates	Percent of the Class
On the basis of choices for all three intraclass groupings	3.1
On the basis of choices for any two intraclass groupings	3.1
On the basis of choices for any one intraclass grouping	15.6
Stars	
On the basis of choices for all three intraclass groupings	0
On the basis of choices for any two intraclass groupings	3.1
On the basis of choices for any one intraclass grouping	9.4

Mutual choices	Percent of the Choices
For all three intraclass groupings	32.1
For arithmetic groups	
Children in same arithmetic group	21.5
Children in different arithmetic groups	12.9
Total	34.4
For reading groups	
Children in same reading group	8.6
Children in different reading groups	32.3
Total	40.9
For social studies groups	
Children in same social studies group	8.6
Children in different social studies groups	12.9
Total	21.5

Distribution of Choices	Percent of the Class
For all intraclass groups	
Receiving no choices	3.1
Receiving 1–5 choices	28.1
Receiving 6–10 choices	34.4
Receiving 11–15 choices	21.9
Receiving 16–20 choices	12.5
Receiving more than 20 choices	0

Distribution of Choices	Percent of the Class
For arithmetic groups	
Receiving no choices	12.5
Receiving 1–2 choices	31.3
Receiving 3–4 choices	37.5
Receiving 5–6 choices	12.5
Receiving more than six choices	6.3
For reading groups	
Receiving no choices	9.4
Receiving 1–2 choices	43.8
Receiving 3–4 choices	18.8
Receiving 5–6 choices	25.0
Receiving more than six choices	3.1
For social studies groups	
Receiving no choices	9.4
Receiving 1–2 choices	34.4
Receiving 3–4 choices	37.5
Receiving 5–6 choices	12.5
Receiving more than six choices	6.3

CHAPTER VIII

The Organization and Structure of Intraclass Groups in Class V-1

The purpose of Chapter VIII is to describe the structure of Class V-1, the organization of intraclass groups in the class, and the structure of the intraclass groups organized as revealed by interview, statistical, and sociometric information.

THE STRUCTURE OF THE CLASS

There were thirty-two children in Class V-1, fifteen boys and seventeen girls. The youngest child in the class, a girl, was ten years two months old on May 1, 1951, and the oldest child, also a girl, was eleven years seven months old. At this time the youngest boy in the class was ten years three months old, and the oldest boy was eleven years five months old. This very limited range in chronological age would indicate normal progress of all children in the class. Seventeen of the thirty-two children had done all their school work in the Austin Public Schools, and fifteen children had attended private schools or public schools in other cities. No child in the class was older than six years eleven months on September 1,1946, the approximate date of initial entrance to school for all children in the class. The oldest child in the class entered the Austin Public Schools in September, 1946. On the other hand, fourteen children, nine boys and five girls, were younger than six years of age on September 1, 1946. Six of these children were six years of age before December 1, 1946, and were allowed to enter the public schools by tests and special permits, and eight of them began their school experiences in private schools or schools outside of Austin. The chronological ages of the children in Class V-1 are summarized in Table XIII.

TABLE XIII

Distribution of Chronological Ages, Class V-1

	Number of Pupils	C. A. in Months, May 1, 1951 Average	Range
Boys	15	130.1	123–137
Girls	17	127.8	122–139
Total	32	128.8	122–139

Results of the California Test of Mutual Maturity were available for thirty-one children, fourteen boys and seventeen girls. The boy for whom there was no test was a transfer into the Austin Public Schools, and this fact probably explains why he had not been given this test. Using the I.Q.'s which this test yields and chronological ages as of May 1, 1951, mental ages as of May 1, 1951, were determined. The I.Q.'s based on total factors ranged from eighty-two to 138. Both the highest and lowest I.Q.'s were recorded for girls. The range in I.Q.'s for boys was from ninety-two to 134. The average language mental ages for the children was 147.1 months as compared to an average non-language mental age of 151.5 months. The average total mental age for all children was 148.7 months with a range from 114 to 172 mnoths. The average total mental age of the boys was 150.9 months, and the average total mental age of the girls was 146.8 months. This information is presented in condensed form in Table XIV.

Twenty-eight children, thirteen boys and fifteen girls, were given the Metropolitan Achievement Tests, Intermediate Battery, Form T in May, 1951. The mean average achievement age for the class as indicated by tests was 149.8 months with mean average achievement ages of 151.9 months for the boys and 148.0 months for the girls. This battery included tests of reading comprehension and vocabulary, arithmetic fundamentals and problems, English usage, literature, history-civics, geography, science, and spelling. The average arithmetic achievement age for the class was 142.9 months as compared to an average reading achievement age of 156.3 months. The achievement in arithmetic is the lowest achievement indicated on any of the separate tests, while the average achievement age in English of 157.9 months is the highest. Details of the achievement test results are summarized in Table XV.

Chart 11 presents graphically the relationship between achievement in reading and arithmetic in Class V-1. The most striking fact indicated by this chart is the relatively higher achievement in reading than in arithmetic for seventeen of the pupils in the class. The greatest difference in achievement in these two areas was recorded for a girl whose average achievement age was ten years nine months in arithmetic and fourteen years ten months in reading. It is interesting that this girl had recorded for her a language I.Q. of 136 and a non-language I.Q. of 103; the language M.A. of 167 months and the non-language M.A. of 127 months show a difference which parallels the difference in achievement in reading and arithmetic.

TABLE XIV

Distribution of Intelligence Test Results, Class V-1

	Number of Pupils	Ability as Measured by the California Test of Mental Maturity					
		Language		Non-Language		Total	
		I. Q.	M. A.*	I. Q.	M. A.*	I. Q.	M. A.*
Boys	14						
Average		112.8	146.5	122.1	158.4	116.4	150.9
Range		91–134	121–172	92–137	126–172	92–134	126–172
Girls	17						
Average		115.8	147.5	114.5	145.8	115.3	146.8
Range		80–140	111–176	84–153	113–193	82–138	114–168
Total	31						
Average		114.4	147.1	117.9	151.5	115.8	148.7
Range		80–140	111–176	84–153	113–193	82–138	114–172

*M. A.'s as of May 1, 1951

TABLE XV

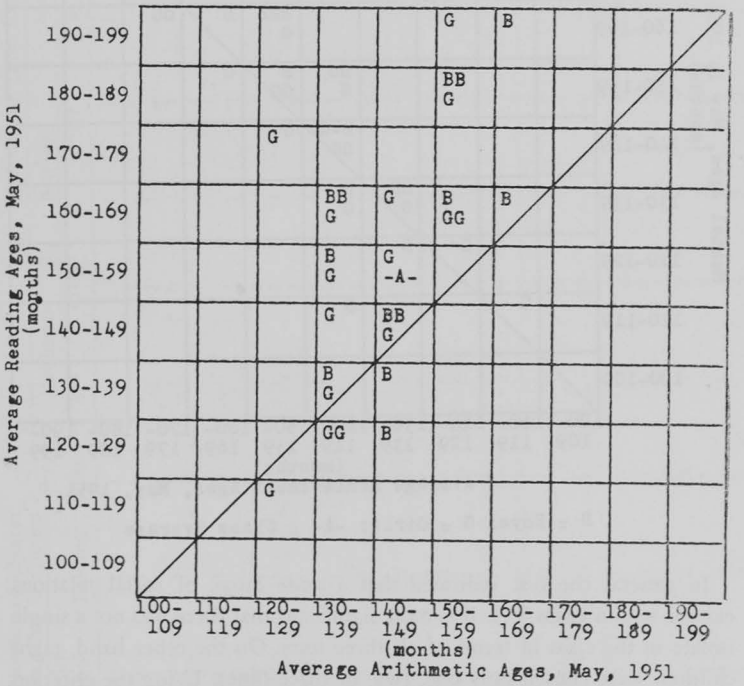
Distribution of Achievement Test Results, Class V-1

	Number of Pupils	Achievement Ages, May, 1951 As Measured by the Metropolitan Achievement Tests, Intermediate Battery													
		READING			ARITHMETIC			SOCIAL STUDIES							
		Reading 1	Vocab-lary	Average	Funda-mentals	Prob-lems	Average	Eng-lish	Liter-ature	History & Civics	Geog-raphy	Average	Science	Spell-ing	Average Achieve-ment
Boys	13														
Average		157.0	160.4	158.4	141.8	151.3	146.3	161.5	149.4	144.8	147.7	145.9	155.4	152.9	151.9
Range		129–193	120–195	124–192	129–157	133–175	131–166	136–195	123–192	108–175	130–188	123–167	122–219	131–185	130–181
Girls	15														
Average		156.3	153.1	154.5	137.9	142.3	140.0	154.8	148.7	142.9	148.2	145.3	154.9	144.9	148.0
Range		117–193	109–189	113–191	122–148	124–172	123–159	109–186	102–192	119–188	114–192	117–190	119–214	107–172	114–177
Total	28														
Average		156.6	156.5	156.3	139.7	146.5	142.9	157.9	149.0	143.8	148.0	145.6	155.1	148.6	149.8
Range		117–193	109–195	113–192	122–157	124–175	123–166	109–195	102–192	108–188	114–192	117–190	119–219	107–185	114–181

Chart 12 shows the relationship between achievement and mental ages for children in Class V-1. The chart indicates a close relationship between average achievement ages and mental ages. Only two children, both girls, had recorded for them mental and average achievement ages which differed as much as a year, and in both cases the average achievement ages were the greater. In one case, the average achievement age was 142 months as against a mental age of 119 months. In the second case, the average achievement age was 160 months as against a mental age of 148 months.

CHART 11

THE RELATIONSHIP BETWEEN ACHIEVEMENT IN READING AND ARITHMETIC, CLASS V-1



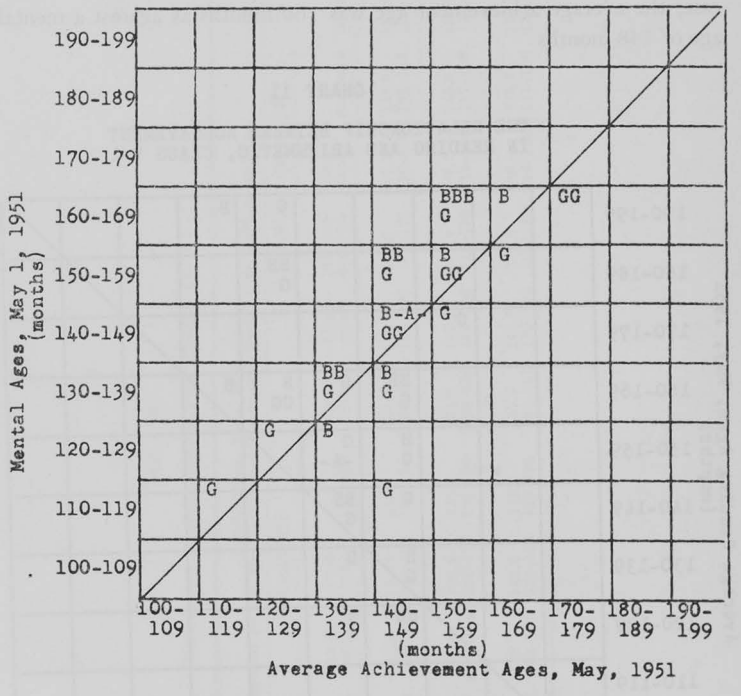
B = Boys; G = Girls; -A- = Class Average

In May, 1951, thirty of the children were given the sociometric test which was described in Chapter V. Two girls were absent when the test was given. The results of the sociometric test is summarized in Table

XVI. This table parallels Table X which was explained in Chapter XII and is to be interpreted in the same way.

CHART 12

THE RELATIONSHIP BETWEEN MENTAL AGES AND AVERAGE ACHIEVEMENT AGES, CLASS V-1



B = Boys; G = Girls; -A- = Class Average

In general the test indicated that a wide range of social relations existed within Class V-1. It is most significant that there was not a single isolate in the class in terms of all three tests. On the other hand, eight children were chosen only one, two, or three times. Using the criterion previously suggested, two boys could have been considered stars. One received twenty-one choices, and the other was chosen eighteen times. Approximately one-sixth of all choices were mutual choices. A study of the choices would indicate a unified class. Only three children, all

TABLE XVI

Summary of Sociometric Choices, Class V-1

Pupil	Number of Choices Realized in Groups			Number of Times Chosen for Groups								
				Arithmetic		Reading		Social Studies		Total		
	Arithmetic	Reading	Total	M*	O*	M	O	M	O	M	O	T
B1		1	1			1	1		1	1	2	3
B2	2	1	3		2		5		5		12	12
B3	2		2	1	2	1			3	2	5	7
B4	2	1	3	1	6		5	1	8	2	19	21
B5	2		2		1		2	1	4	1	7	8
B6	1	3	4				1	1	1	1	2	3
B7	2	2	4		5	1	3		3	1	11	12
B8	2	1	3	1	6		5	2	4	3	15	18
B9	2	2	4	2	2	1				3	2	5
B10	2		2		2		4	1	3	1	9	10
B11			0	2	5	1	3	1	4	4	12	16
B12	2	1	3		2		1	1		1	3	4
B13	3	3	6		1	1			2	1	3	4
B14			0		3	1	7		5	1	15	16
B15	3		3		1	1	2		2	1	5	6
G1		1	1		1				1		2	2
G2	2	2	4	2	2	2	2		1	4	5	9
G3	1	1	2	1	3	2	4		5	3	12	15
G4	1	1	2						2		2	2
G5			0	1	4		5	1	1	2	10	12
G6	2	1	3				1				1	1
G7		2	2	1	1	3	2		4	4	7	11
G8	Absent				3				3		6	6
G9	1		1		2						2	2
G10	Absent				1		1				2	2
G11	2		2		2		1		3		6	6
G12	1	2	3		2				1		3	3
G13	2	1	3		3	1	2		6	1	11	12
G14	2	1	3	1	1	1	5		1	2	7	9
G15	1		1		3	2	1	1	3	3	7	10
G16	3	3	6	1	5	1	2		1	2	8	10
G17	1	2	3		5	2	3		3	2	11	13
	44	32	76	14	76	22	68	10	80	46	224	270

*M—Mutual Choice.
*O—One-way Choice.

chosen twelve or more times, were not working in a group with some child of their choice.

The children in the fifth grade were also asked what they liked and disliked about working in groups in arithmetic, reading, and social studies. The answers indicated definitely that the children enjoyed group work. Twenty-two of thirty children taking the test clearly stated there was nothing they disliked about working in groups, and all children gave some reasons for liking to do so.

Four children indicated disliking some specific tasks associated with group work, such as reading aloud or hard problems. Three said they disliked working in groups at times because of noise or lack of co-operation. One girl stated that it embarrassed her to make a mistake in the group.

Some of the reasons given for liking to work in groups were rather vague, and any very accurate classification seems impossible. More than half of the reasons given had to do with the personal relationships within the groups and the possibilities for helping one another. One girl stated she liked to work in reading groups because of "the very nice people" in the group. Others indicated that "you can get ideas from others" or that "you can help each other." A few reasons given for enjoying group work had to do with the tasks undertaken, such as dramatizations or interesting problems.

The Intraclass Groups

The teacher of Class V-1 used intraclass grouping for instructional purposes. She had organized three semipermanent reading groups and three semipermanent arithmetic groups.

She had not organized intraclass groups for social studies which could be described as semipermanent. However, she stated that she very frequently set up more or less temporary groupings which might be loosely described as interest groups as the children worked on social studies units. Such groupings had functioned for a very short time on occasions and on other occasions they had carried over for several weeks. Children in the class frequently played in groups, but the grouping varied widely from day to day during the physical education period. The teacher stated that there was almost daily informal, natural grouping of children during the activity period.

Bases for Grouping

The teacher of Class V-1 gave a series of informal, teacher-made, diagnostic tests as her first step in grouping for instruction in reading. She also studied the Metropolitan Achievement Tests results. She attempted no grouping for about a week but tried to keep the class working together during that time. Then she set up her four reading groups largely upon the basis of reading achievement as measured by the tools mentioned above. However, she did give consideration to other factors; for example, she had tried not to put too many children from a single school in a single group because she thought it would be easier for children to develop a loyalty to the new school if this was not done. This teacher faced the interesting problem of a distribution of reading achievement very definitely skewed toward the superior end. Groups 1 and 2 were on approximately the same achievement level, but the teacher did not think that it was best to have too large a reading group. She believed that it is incorrect to assume, as many teachers do, that the most advanced group should be the largest intraclass group in a classroom. In fact, she pointed out that in her experience advanced groups were frequently rather individualistic and had some difficulties in learning to work together and that personality clashes are more likely to arise in the most advanced group than in any other group. She originally had four groups, but at the time of this cross-sectional study she had only three groups. After she lost two children by transfer from her slowest reading group, she felt it might be best to combine the remaining children in that group with the reading group just above them in achievement. She called together the readers in the two least advanced groups and explained that it might be possible for them to work together. She pointed out that they would have a bigger group and might find it more difficult to work together but that she had confidence in their ability to work together in a larger group. She left up to the children the responsibility for deciding whether or not it would be best for the groups to combine. The children decided to do so.

The arithmetic groups in Class V-1 were set up very much in the same way the reading groups were organized. However, academic achievement was given somewhat more weight, and other factors were given a minimum of consideration.

This teacher said that she frequently found it necessary to take into consideration a complex of factors when deciding upon the group place-

ment of any child. She gave interesting examples of problems which she had met in grouping.

Anita and Ruth, who were both members of Group 1, were described as very capable girls who had been very close friends for years. Ruth was very definitely dominating Anita. Anita's parents, as well as the teacher, had become very concerned about the relationship between the girls. The teacher had a conference with them and very frankly tried to lead them to understand why she thought it best for them to be in different groups. Although both girls seemed disappointed they accepted the shift in groups in a very fine spirit. The teacher believed that it had been a wise move and that both girls had seemed happy in their new reading group relationships. The two girls remained close friends.

The teacher told of having moved David from his group to a more advanced group because he and Owens were constantly coming in conflict with one another.

Ann was described as a child who had presented a very different problem. She had cried about her group placement when she was put in Group 2 and begged to be put in the most advanced reading group. The teacher had made the adjustment, and Ann seemed to be working satisfactorily with reading Group 1.

The teacher contrasted the attitude of two boys toward their arithmetic group placement. Jimmy and Lynn had both been doing good work and appeared contented in arithmetic Group 2, but the teacher thought both boys were capable of doing much better work. The teacher had held individual conferences with both children. Jimmy had reached the decision that he would try to work a little harder and do the work of Group 1. He had been placed in this group where he had done satisfactory work. On the other hand Lynn had looked at the problem in a very different way. He had agreed that he might be able to do the work of Group 1 but had stated that he was perfectly happy in Group 2, that he was not behind in arithmetic, and that he saw no reason for being in Group 1. In short, he made it clear that he preferred spending less time on arithmetic and being able to have more time to do other things that interested him more. The teacher had not been able to change his attitude and asked a very simple question, "Could Lynn be right about this?"

The Structure of the Arithmetic Groups

The teacher of Class V-1 had organized three groups for instruction in

TABLE XVII

Distribution of Intelligence and Achievement Test Results, Arithmetic Groups, Class V-1

	Number of Pupils	Mental Ages, May 1, 1951			Achievement Ages, May, 1951			
		Language	Non-Language	Total	Arithmetic Fundamentals	Arithmetic Problems	Average Arithmetic	Average Achievement
All Pupils	32							
Average		147.1	151.5	148.7	139.7	146.5	142.9	149.8
Range		111–176	113–193	114–172	122–157	124–175	123–166	114–181
Arithmetic Group 1	11							
Average		151.5	161.5	155.0	145.8	158.5	152.1	159.7
Range		121–176	149–178	137–169	138–157	142–175	140–166	138–181
Group 2	14							
Average		148.4	149.0	149.1	138.7	143.0	140.6	146.4
Range		113–172	125–172	119–172	129–148	135–162	133–153	130–159
Group 3	7							
Average		138.1	142.3	138.9	130.3	130.8	130.3	138.0
Range		111–167	113–193	114–156	122–128	124–135	123–134	114–161

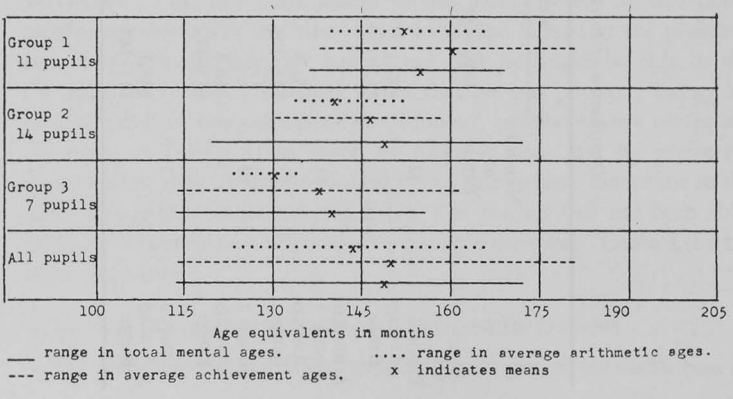
arithmetic. There were eleven children in Group 1, fourteen children in Group 2, and seven children in Group 3.

Results of the California Test of Mental Maturity were available for all children except one child in Group 1. The recorded average mental ages were 138.9 months for Group 3, 149.1 months for Group 2, and 155.0 months for Group 1. The ranges in mental ages for the three groups do not indicate the three distinct levels of ability that the average mental ages might suggest. Group 2 showed the greatest range in mental ages, from 119 months to 172 months. The results of the California Test of Mental Maturity are summarized for the arithmetic groups in Table XVII.

The Metropolitan Achievement Tests had been given to all the children except three children in Group 2 and one child in Group 3 who were absent when the tests were given. The mean average achievement ages for the groups were 138.0 months for Group 3, 146.4 months for Group 2, and 159.7 months for Group 1. A wide range in average achievement in all groups was shown by the test results. A comparison of the ranges of achievement in Groups 3 and 2 is interesting. The range in average achievement ages was from 114 months to 161 months for Group 3 and from 130 months to 159 months for Group 2. The mean average arithmetic ages were 130.3 months for Group 3, 140.6 months for Group 2, and 152.1 months for Group 1. The ranges in arithmetic ages were eleven months for Group 3, twenty months for Group 2,

CHART 13

DISTRIBUTION OF INTELLIGENCE AND ACHIEVEMENT TEST RESULTS, ARITHMETIC GROUPS, CLASS V-1



and twenty-six months for Group 1. The results of the achievement tests given the arithmetic groups in Class V-1 are summarized in Table XVII. A parallel graphic summary is presented in Chart 13.

All the children except a girl in Group 1 and a girl in Group 3 took the sociometric test which has been described in detail. Chart 14 gives a tabulation of the children's choices for arithmetic group associates and a numerical summary of these choices. This chart is similar to Chart 7 and is to be interpreted in the same way. Figure 4 presents a sociogram of the children's choices. This sociogram is similar to other sociograms which have been presented.

CHART 14

TABULATION OF CHOICES FOR ARITHMETIC GROUP ASSOCIATES, CLASS V-1

Tabulation of Choices

Pupils Choosing Arithmetic Group Associates, Arranged by Existing Groups

Group 1: B 2, B 4, B 5, B 7, B 10, B 11, B 13, G 5, G 10, G 12, G 14

Group 2: B 1, B 3, B 6, B 8, B 9, B 12, B 14, B 15, G 2, G 3, G 9, G 11, G 13, G 15, G 16

Group 3: B 6, G 1, G 4, G 6, G 7, G 8, G 17

Pupils Chosen for Arithmetic Group Associates

B 2, B 4, B 5, B 7, B 10, B 11, B 13, G 5, G 10, G 12, G 14, B 1, B 3, B 6, B 8, B 9, B 12, B 14, B 15, G 2, G 3, G 9, G 11, G 13, G 15, G 16, B 6, G 1, G 4, G 6, G 7, G 8, G 17, Total

Numerical Summary of Choices

Number of Choices Received	Mutual		One-way		Total
	M	M	ø	O	
B 2				2	2
B 4	1		3	3	7
B 5				1	1
B 7			4	1	5
B 10			2		2
B 11		2	4	1	7
B 13				1	1
G 5		1		4	5
G 10				1	1
G 12			1	1	2
G 14	1			1	2
B 1					0
B 3	1		1	1	3
B 6		1	4	2	7
B 9	1	1	1	1	4
B 12				2	2
B 14			1	2	3
B 15			1		1
G 2	1	1	1	1	4
G 3		1	2	1	4
G 9			1	1	2
G 11				2	2
G 13			2	1	3
G 15			1	2	3
G 16	1		4	1	6
B 6					0
G 1			1		1
G 4					0
G 6					0
G 7		1	1		2
G 8			1	2	3
G 17			2	3	5
Total	6	8	38	38	90

*Pupil absent at time of test.
ø - One-way choice, pupils in one group.
O - One-way choice, pupils in different groups.
M - Mutual choice, pupils in one group.
M - Mutual choice, pupils in different groups.

An examination of Chart 14 and Figure 4 gives some indications of the social relations within the arithmetic groups in this room. Four

children did not receive any choices, and thirteen children received only one or two choices. Three children could have been considered stars on the basis of the criterion which has been used in this study. Forty-eight or approximately one-half of the choices were realized by the children because of their placement in the arithmetic groups. Only fourteen of the choices were mutual choices.

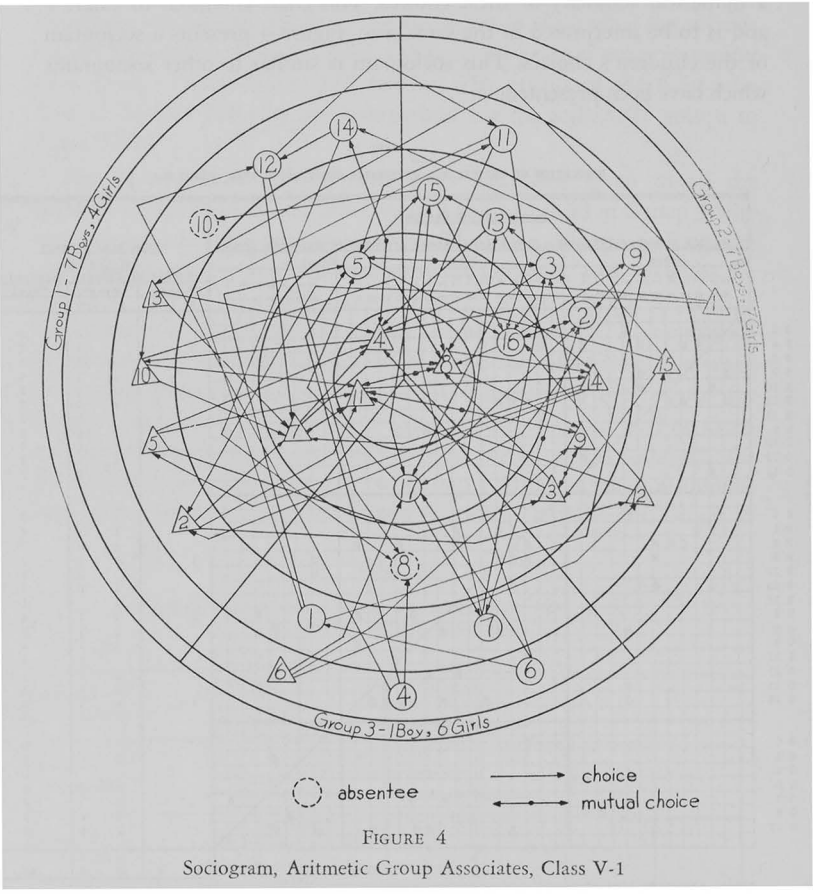


FIGURE 4
Sociogram, Aritmetic Group Associates, Class V-1

THE STRUCTURE OF THE READING GROUPS

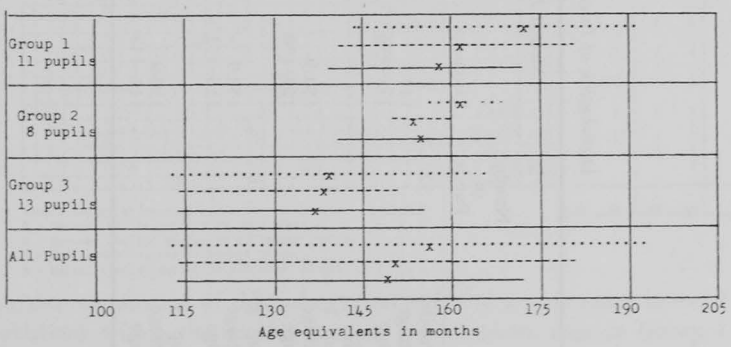
There were three intraclass groups for instruction in reading in Class V-1. There were eleven pupils in Group 1, eight pupils in Group 2, and thirteen pupils in Group 3.

All children except one girl in Group 1 had been given the California Test of Mental Maturity. The results of these tests indicated average mental ages of 137.4 months for Group 3, 155.1 months for Group 2, and 158.2 months for Group 1. The ranges in mental ages were from 114 months to 156 months for Group 3, from 141 months to 168 months for Group 2, and from 139 months to 172 months for Group 1. The similarity of both averages and ranges for Groups 1 and 2 is interesting. The results of the intelligence test given the arithmetic groups in Class V-1 are given in Table XVIII.

All children except one child in Group 1, one child in Group 2, and two children in Group 3 had taken the Metropolitan Achievement Tests. The mean average achievement age of Group 3 was 137.6 months with a range from 114 months to 151 months, the mean average achievement age of Group 2 was 153.0 months with a range from 149 months to 159 months, and the mean average achievement age of Group 1 was 161.0 months with a range from 141 months to 181 months. The mean average reading age of Group 3 was 138.8 months with a range from 113 months to 167 months, the mean average reading age of Group 2 was 162.0 months with a range from 155 months to 169 months, and the mean average reading age of Group 1 was 171.6 months with a range from 143 months to 192 months. The test results indicate three progressive levels of achievement in terms of averages, wide ranges in achievement within all three groups, and considerable overlapping in achieve-

CHART 15

DISTRIBUTION OF INTELLIGENCE AND ACHIEVEMENT TEST RESULTS
READING GROUPS. CLASS V-1



____ range in total mental ages. .... range in average reading ages
---- range in average achievement ages. x indicates means

TABLE XVIII

Distribution of Intelligence and Achievement Test Results, Reading Groups, Class V-1

	Number of Pupils	Mental Ages, May 1, 1951			Achievement Ages, May, 1951			
		Language	Non-Language	Total	Reading 1	Vocab-ulary	Average Reading	Average Achieve-ment
All Pupils	32							
Average		147.1	151.5	148.7	156.6	156.6	156.3	149.8
Range		111–176	113–193	114–172	117–193	109–195	113–192	114–181
Reading Group 1	11							
Average		159.3	156.1	158.2	172.5	170.7	171.6	161.0
Range		125–176	127–178	139–172	142–193	137–195	143–192	141–181
Group 2	8							
Average		158.0	149.5	155.1	163.7	161.6	162.0	153.0
Range		136–172	135–161	141–168	158–171	151–177	155–169	149–159
Group 3	13							
Average		130.9	149.2	137.4	137.7	140.3	138.8	137.6
Range		111–148	113–193	114–156	117–163	109–181	113–167	114–151

ment between members of different groups. The results of the achievement tests are recorded in Table XVIII. Chart 15 presents some of the same information in graphic form.

All the children except one child in Group 1 and one child in Group 2 took the sociometric test which has previously been described. Chart 16 gives a tabulation of the children's choices for reading group associates. The same information is presented as a sociogram in Figure 5. Chart 16 is similar to Chart 7 and is to be interpreted in the same way, and Figure 5 parallels Figure 1 which has been explained in detail.

CHART 16

TABULATION OF CHOICES FOR READING GROUP ASSOCIATES, CLASS V-1

Tabulation of Choices

Pupils Choosing Reading Group Associates, Arranged by Existing Groups

Group 1: B 1, B 2, B 5, B 7, B 10, B 13, G 4, G 8, G 9, G 12, G 14

Group 2: B 3, B 14, G 3, G 5, G 10, G 11, G 15, G 16

Group 3: B 4, B 6, B 8, B 9, B 11, B 12, B 15, G 1, G 2, G 6, G 7, G 13, G 17

Pupils Chosen for Reading Group Associates

B 1, B 2, B 5, B 7, B 10, B 13, G 4, G 8, G 9, G 12, G 14, B 3, B 14, G 3, G 5, G 10, G 11, G 15, G 16, B 4, B 6, B 8, B 9, B 11, B 12, B 15, G 1, G 2, G 6, G 7, G 13, G 17

Numerical Summary of Choices

	Number of Choices Received				
	Mutual		One-way		Total
	M	M	ø	o	
B 1		1	1		2
B 2			1	4	5
B 5			1	1	2
B 7	1			3	4
B 10			4		4
B 13	1				1
G 4					0
G 8					0
G 9					0
G 12					0
G 14		1	2	3	6
B 3		1			1
B 14		1	1	6	8
G 3	1	1		4	6
G 5			1	4	5
G 10				1	1
G 11				1	1
G 15		2		1	3
G 16	1			2	3
B 4			2	3	5
B 6				1	1
B 8			3	2	5
B 9		1			1
B 11		1	2	1	4
B 12			1		1
B 15		1		2	3
G 1					0
G 2	1	1	1	1	4
G 6				1	1
G 7	2	1	1	1	5
G 13	1		1	1	3
G 17	2			3	5
Total	10	12	22	46	90

*Pupil absent at time of test.

ø - One-way choice, pupils in same group.

O - One-way choice, pupils in different groups.

M - Mutual choice, pupils in one group.

M - Mutual choice, pupils in different groups.

An examination of this information points to a wide range in social relations within the reading groups. Five children, four in Group 1 and one in Group 3, were isolates. Using the criterion previously sug-

gested, only one child, a boy in Group 2, could have been considered a star. Twenty-two of the choices were mutual choices. Thirty-two or approximately one-third of all choices were realized through the work children were doing in the reading groups.

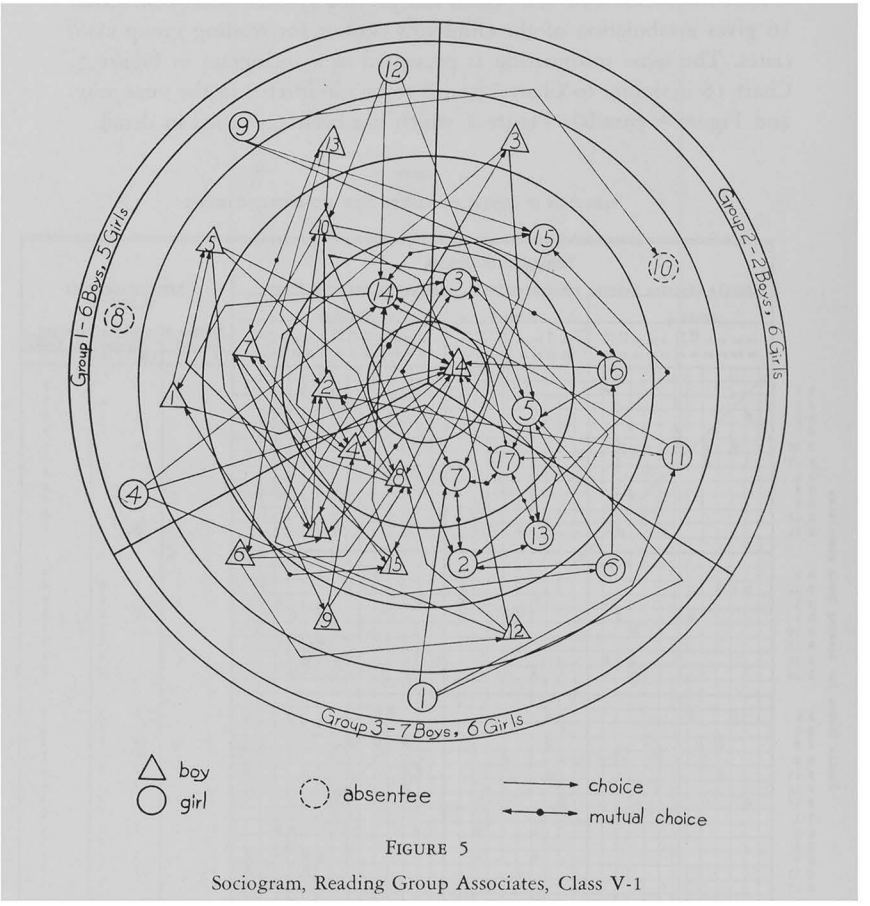


FIGURE 5

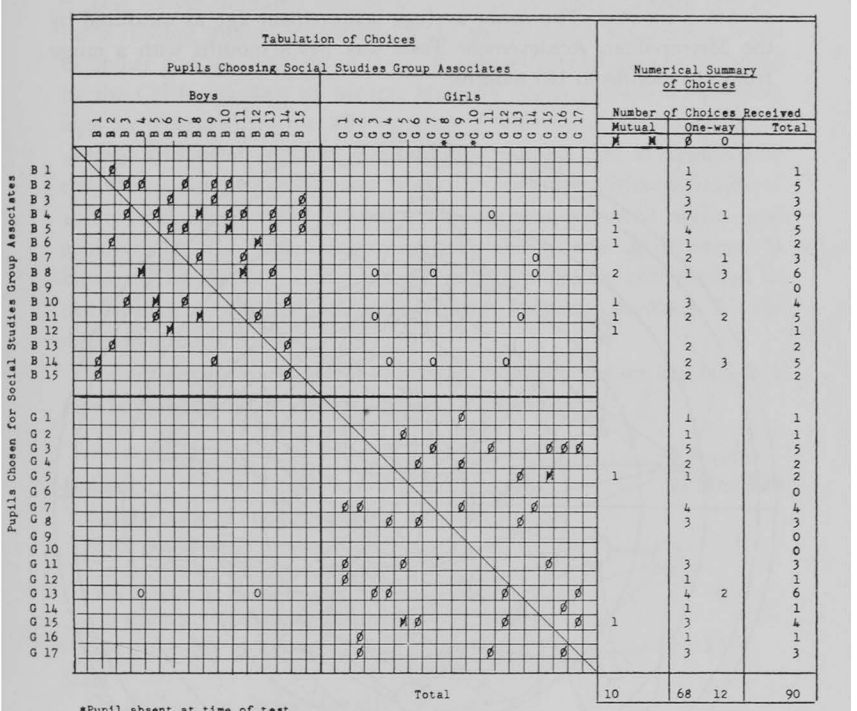
Sociogram, Reading Group Associates, Class V-1

The teacher of Class V-1 had not organized social studies groups, but the children's choices of social studies group associates are reported here in order to contrast children's choices of associates for work which was customarily carried on in semipermanent groups and for other types of work. Chart 17 and Figure 6, which are similar to Chart 7 and Figure 1, give the children's choices of social studies group associates.

A study of this information would seem to indicate little if any difference in the nature of these children's choices for social studies group associates and other group associates.

CHART 17

TABULATION OF CHOICES FOR SOCIAL STUDIES GROUP ASSOCIATES, CLASS V-1



SUMMARY

Chapter VIII is an attempt (1) to show the structure of Class V-1 as it is revealed through a study of the results of the Metropolitan Achievement Tests, the California Test of Mental Maturity, and a sociometric test, (2) to describe the organization of the intraclass groups in the class in terms of the same objective information, and (3) to present the bases upon which the intraclass groups were organized.

On May 1, 1951, there were thirty-two children, fifteen boys and seventeen girls, in Class V-1. These children ranged in chronological age from ten years two months to eleven years seven months. All children in the class had progressed through the grades normally. The results of the California Test of Mental Maturity indicated a mental age range of fifty-eight months for the class, with an average mental age of 148.7 months. The mean average achievement age as measured by the Metropolitan Achievement Tests was 149.8 months with a range from 114 months to 181 months.

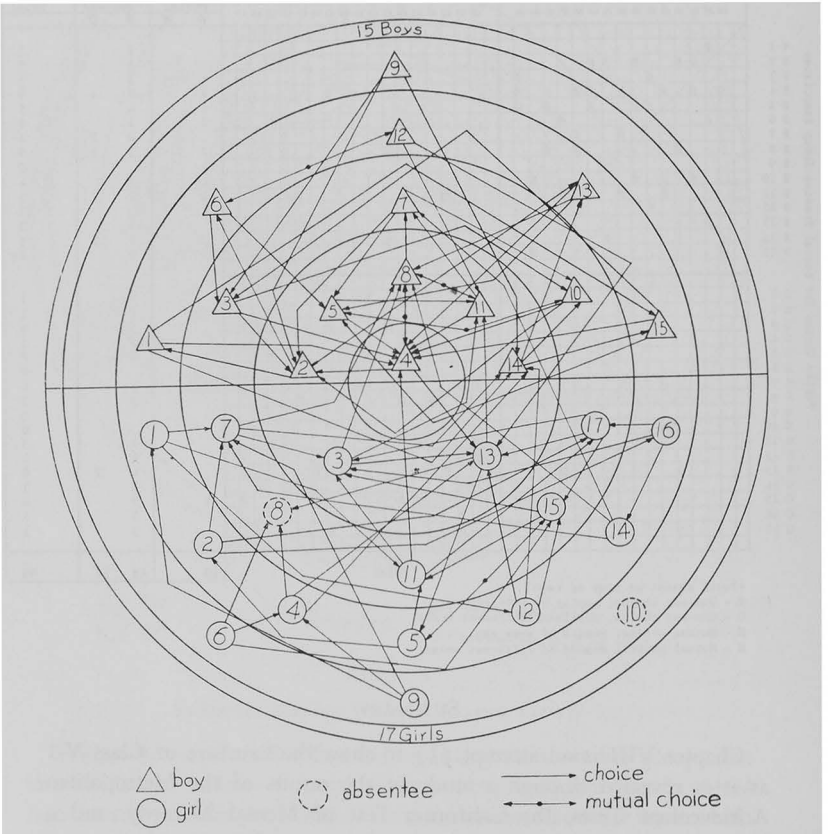


FIGURE 6

Sociogram, Social Studies Group Associates, Class V-1

The teacher of Class V-1 had organized three reading groups and three arithmetic groups. She considered both groupings as achievement groupings but had made many adjustments in the group placement of children on the bases of their social and emotional needs. No social studies groups were organized on semipermanent basis.

Test results indicated that both the three arithmetic groups and the three reading groups represented three well-defined, progressive levels of ability and achievement in terms of average mental ages as measured by the California Test of Mental Maturity, mean average achievement ages as measured by the Metropolitan Achievement Tests, and mean average arithmetic ages and mean average reading ages as measured by the Metropolitan Achievement Tests. These three different levels of ability and achievement existed only in terms of mean ability and achievement, for wide ranges in both ability and achievement as measured by the tests existed in all intraclass groups and resulted in overlapping in ability and achievement between members of the different groups.

An interesting overview of the social relations picture in Class V-1 may be gained from the following tabulation of facts:

Isolates	Percent of the Class
On the basis of choices for all three intraclass groupings	0
On the basis of choices for any two intraclass groupings	9.4
On the basis of choices for any one intraclass grouping	21.9
Stars	
On the basis of choices for all three intraclass groupings	0
On the basis of choices for any two intraclass groupings	3.1
On the basis of choices for any one intraclass grouping	9.4

Mutual choices	Percent of the Choices
For all three intraclass groupings	17.0
For arithmetic groups	
Children in same arithmetic group	6.7
Children in different arithmetic groups	8.9
Total	15.6

Mutual choices	Percent of the Choices
For reading groups	
Children in same reading group	11.1
Children in different reading groups	13.3
Total	24.4
For social studies groups	
Total	11.1

Distribution of choices	Percent of the Class
For all intraclass groups	
Receiving no choices	0
Receiving 1–5 choices	34.4
Receiving 6–10 choices	31.3
Receiving 11–15 choices	21.9
Receiving 16–20 choices	9.4
Receiving more than 20 choices	3.1
For arithmetic groups	
Receiving no choices	12.5
Receiving 1–2 choices	40.6
Receiving 3–4 choices	25.0
Receiving 5–6 choices	12.5
Receiving more than 6 choices	9.4
For reading groups	
Receiving no choices	15.6
Receiving 1–2 choices	31.3
Receiving 3–4 choices	25.0
Receiving 5–6 choices	25.0
Receiving more than 6 choices	3.1
For social studies groups	
Receiving no choices	12.5
Receiving 1–2 choices	37.5
Receiving 3–4 choices	25.0
Receiving 5–6 choices	21.9
Receiving more than 6 choices	3.1

CHAPTER IX

Working with Groups in the Classroom

An analysis of practices in intraclass grouping reveals certain factors which are involved in the teacher's guidance of group work. Any classification of such factors is arbitrary and somewhat inaccurate because all of the factors are so completely interrelated that there are no clear-cut distinctions. However, such a classification does serve to clarify the problem of working with intraclass groups and lends organization to a discussion of the subject.

The following factors are considered in the present analysis: (1) setting standards and evaluating work, (2) developing desirable group-work habits, (3) planning for group work by pupils and teachers, (4) developing pupil leadership, (5) maintaining the unity of the class, (6) selecting appropriate group activities, (7) working with several groups at one time, (8) managing routine, and (9) meeting individual needs within the intraclass groups.

These factors were selected after a study of the professional literature on the subject had been made and a series of preliminary, exploratory observations and interviews were completed. Although the list of these factors did not determine the form of either the observations or interviews, these factors were kept in mind as all observations and interviews progressed and indirectly gave direction to both.

Interviews and observations furnished information about the way in which these factors were functioning in the six classroom situations which were studied. This information is reported in this chapter in the form of a descriptive account of practices in operation in the six classrooms.

SETTING STANDARDS AND EVALUATING WORK

In interviews the teachers individually indicated the importance of setting standards and evaluating children's work. The teachers were completely consistent in pointing out that setting standards and evaluating work were basic to successful group work. The principle involved did not seem to vary with the grade level.

The philosophy in operation.—Statements from two of the teachers may serve to indicate the philosophy held by the six faculty members. Without any leading questioning, the teacher of Class I-2 stated that

her first step in initiating group work was "over-all planning with the class." The teacher of Class V-2 stated that she felt setting standards was "an absolutely necessary basis for all successful group work."

It is impossible to separate a consideration of setting standards and evaluating work in sub-groups from the problem of setting standards and evaluating work in general. These are not unique problems as they apply to group work.

All teachers worked in a similar manner as they led children to set standards. All six teachers were certain that the children had had a part in setting standards in their rooms. The teacher of Class III-1 pointed out that she felt standards could hardly be understood or respected by those who had had no part in making them. In each case an effort had been made to be certain that standards were very clearly and definitely stated. The teacher of Class I-1 stated that she tried to avoid broad generalizations that were of relatively little meaning to children. For example she said that a first-grader had to be led to see what "being a good worker" involved.

All of the teachers kept standards before their classes and led the children to evaluate their work and behavior in terms of the standards that the children themselves had set up. The teacher of Class III-2 clearly pointed out that evaluation and setting of standards are inseparable and that all evaluation should be in terms of standards understood by children. Each teacher stated that it was necessary frequently to give children an opportunity to evaluate their work. All of the teachers stated that they tried to watch for evidences of growth on the part of the children in their capacity for evaluation, and without exception each teacher was making a conscious effort to help her children develop this valuable skill. The teacher of Class V-1 stated that she was trying very hard to help her children grow in their insight into "the constructive nature of the evaluative process."

Statements of standards.—At the time classroom observations were made there were charts giving standards in five of the six classrooms. Below is a list of the titles of these charts and the classrooms in which they were found:

Class I-1	Things to Remember.
	Lunchroom Standards.
Class I-2	In Our Room.
Class III-1	How We Work in Groups.
Class III-2	Group Work Standards.
Class V-2	Our Class Standards.
	Standards for Group Work.

It is interesting to contrast two of these charts. The children in Class I-2 had worked out the following very simple standards:

In Our Room

We want to walk softly.
We want to talk softly.
We want to keep our room clean.
We want to be nice to each other.

A statement of standards worked out by the children in Class V-2 is much more detailed and indicates more problems being given consideration by the children. These children had made the following list of standards:

Our Class Standards

1. We enter the room quietly and orderly.
2. We are quiet in the hall.
3. We talk one at a time.
4. We listen when another person speaks.
5. We get a drink when no report or discussion is being given.
6. We go to the toilet one at a time when no report or discussion is being held.
7. We are courteous and polite at all times.
8. We do not bother our neighbors.
9. We keep our books and desks in order.
10. We are neat in our written work.
11. We quietly read library books after our work is done.
12. We do our household duties carefully.
13. We are well mannered in the lunchroom.
14. We are good hosts and hostesses.
15. We are friendly to newcomers.

Of the seven charts referred to above, three dealt with standards for working in small groups. The following chart worked out by the children in Class III-1 is typical of the type of standards that children set up for group work:

How We Work in Groups

Chairman plans with teacher.
Group meets quietly.
Group listens to chairman.
Members of group co-operate.
Group attends to business.
Members work in an orderly manner.

Observations of setting standards and evaluating work.—Classroom observations revealed many interesting examples of setting standards and evaluating work in these six classrooms. Table XIX gives a summary of the recorded observations of such work.

An examination of Table XIX indicates that the investigator was privileged to observe fifteen examples of setting up or reviewing standards and thirty different examples of evaluations. It is significant that thirty-six of these examples involved the co-operative work of pupils and teachers. In many of the thirty-six cases children assumed a role of leadership.

On all grade levels children evaluated their work in small groups most frequently. Nineteen of the thirty evaluations observed were evaluations of group work.

Table XIX may give a distorted picture of the emphasis put upon evaluation; for example, the table would indicate more frequent use of evaluation in Class III-1 than in Class III-2. However, the investigator detected no significant difference in emphasis in the two classrooms. The table gives no picture of the nature of the observations; for example, some of the incidents referred to in the table were rather limited in the time they consumed while others consumed a great deal more time.

Specific examples.—A clear idea of the way these six teachers led children to set up standards and evaluate their work may be gained through a study of some specific examples. The incidences reported below are typical of the observations made by the investigator.

1. The teacher of Class I-1 led the children in a period of evaluation which lasted approximately ten minutes. After three reading groups had worked with her, she indicated that it would be well for them to check their work. She asked all of the children who had completed their work to raise their hands. There followed a short group discussion of the fact that it was the children's responsibility and not the teacher's to see that jobs were completed. The leader of each group then checked on the work done by members of his group and made a report to the class. One child suggested that children should stay in the room during the play period when all work was not completed. A child led a serious and fair discussion of the problem and called for a vote which resulted in putting into effect the plan suggested. At this point the teacher suggested that the vote might not be fair and that she questioned voting on punishment without a warning. The children readily agreed with the teacher's point of view and agreed that the plan would not go into effect until the next day.

2. Just before the children left the room for lunch the teacher of Class I-1 asked them to read together the chart on lunchroom standards.

TABLE XIX

Observations of Setting Standards and Evaluating Work

Observations	Classes						All Classes
	I-1	I-2	III-1	III-2	V-1	V-2	
Setting Standards							
1. Evolving Standards							
a. For class work	P					P	2
b. For group work						PT	2
2. Referring to established standards							
a. For class work	PT		T		T	T	5
b. For group work	PP		P			PPT	6
3. Number of Observations	5	0	2	0	1	7	15
Evaluating Work							
1. Evaluating class work		T		P	P	P	4
2. Evaluating group work	P	PPPPP	PPPPP	PPT	PPP	PT	19
3. Evaluating individual work	P		P		PP	P	5
4. Evaluating the work of the day						PP	2
5. Number of Observations	2	6	6	4	6	6	30
Total Number of Observations	7	6	8	4	7	13	45

NOTE: P—pupils and teachers; T—teachers.

3. After the children had been engaged in group work for about fifty minutes, the teacher of Class I-1 called each child's name and asked him to tell what he had done and to indicate whether or not he felt that he had spent his time well. She then asked if there was any child who did not have a definite job. The children indicated that they all believed they could use their time profitably.

4. Children in Class I-2 who wanted to submit pictures for the "picture show" they were making lined up in front of the room and took turns holding up their pictures and giving explanations of what they had drawn. After all of the pictures had been shown, one child asked for suggestions from the class. The pictures were all praised. It is significant that the class pointed out something good about each picture. The class then voted on the picture to be used. The voting was done while the children who had drawn the pictures turned their backs to the class. The vote was accepted in a very fine spirit by all contestants.

5. As the children of group I-2 put up their mats the teacher made comments upon the rest period. She named some children who had been unusually good resters.

6. A child of Class III-1 presided over the "Show and Tell" period. This pupil-chairman assumed responsibility for the order in the room during the period. Obviously the children had worked on standards, for several times the chairman made statements such as "I believe only one should speak at a time," or "Are we being courteous?"

7. As the children worked on an exercise at their seats, the teacher of Class III-1 held up several very neat papers for all the children to see and suggested that each child look at his own paper to see if he was completely satisfied with it.

8. Although specific references were not made to them, children in Class III-2 had obviously worked on standards for the "Show and Tell," for several times during this period individuals made such suggestions as "We don't tell unimportant things" or "Please speak so I can hear."

9. At the end of the activity period the teacher of Class III-2 walked to the chalk board and wrote "I am proud of your work." She then indicated that she would like to have the attention of the class. Without comment she pointed to her statement on the board and began the preparation for viewing a film.

10. After lunch a child of Class III-2 assumed the responsibility for a period of evaluation. Under this pupil's leadership, individual children reported upon the lunchroom behavior for various tables.

11. In Class V-1 a child led a very fair but critical five-minute period of evaluation following physical education.

12. The teacher of Class V-1 initiated a prolonged period of evaluation with the following statement: "Now it is time for you to evaluate our trip to the caverns. Don't forget we are still having to learn the difference between evaluations and criticism. We are to consider the value of the trip." Different children rose without raising their hands and stated what they had thought most significant about the trip. As

these contributions were made the teacher wrote suggested phrases on the board. A list of twenty-one facts that the children had learned about the caverns were listed. After a period of approximately twenty-five minutes she indicated that she thought it was time for them to begin writing their individual evaluations. The children began to do this with apparent enthusiasm. She suggested that it would be well for them to get their ideas down on paper and then work them over and get them in final form later. The teacher then went about the room helping different children. After fifteen minutes, this work was necessarily interrupted, but the teacher indicated they could complete their work later. There was absolutely no evidence of any trivial criticism of individual behavior.

13. After seeing a film, Class V-2 engaged in a period of evaluation for approximately four minutes. The children evaluated very well the film and group behavior. The fact that two children had to be asked to be seated so others could see received unfavorable comment. On the other hand the speed with which the children got ready to see the film received favorable comment. Major emphasis was placed on what they had gotten from the film.

14. Just before the children went to the gymnasium, the teacher of Class V-2 asked if there were any suggestions or criticisms. One boy volunteered, "I don't see why you're always jumping on us about holding the ball." There followed a free exchange of ideas and an opportunity for the children to think through what they were doing. The children, with very little direction from the teacher, came to the conclusion that the game would be ruined by holding the ball for long periods and would therefore be unfair. The boy who brought up the question decided to abide by the decision of the group. The teacher then stated that those children who considered themselves quiet enough might leave the room. The teacher then left the room with the children following.

15. At 2:50 the teacher of Class V-2 told Carol that she could take over. She suggested that the children straighten up the room. After a reasonable time when the children were seated and quiet, she asked for an evaluation of the day. Children volunteered their opinions on the way the class had worked at various times. They were critical but not unkind in their estimates. There was a minimum of criticism of individuals. At three o'clock the teacher indicated that the class was dismissed.

Obviously periods of evaluation observed varied greatly in a number of respects. The degree of active participation by the children in evaluations varied from no part at all to assuming complete responsibility for the whole process. The teacher's written message "I am proud of your work" and a first-grader's direction of a period of evaluation following reading reports serve as examples of the two extremes.

The time given to a single evaluation also varied greatly. The observer recorded periods of evaluation which varied widely in this respect, from

the time it would take to read a simple sentence to approximately forty minutes spent in evaluating a field trip. The nature of the activity to be evaluated and the importance assigned to the problem by children appeared to be more important in determining the length of time spent in evaluation than did the maturity of the children.

Evaluation may follow a definite pattern and become more or less routine practice. On the other hand it may spontaneously spring from a need which arises and which could not possibly have been anticipated. The observer recorded evaluations initiated by questions as different as "Are there any good criticisms of the report?" and "I don't see why you're always jumping on us about holding the ball." Both routine or structured and spontaneous or unstructured evaluations may be common practice in a given classroom. This appeared to be true in five of the six situations studied. Children in Classes I-2, III-1, III-2, and V-1 regularly evaluated all reports made by reading groups. Children understood the procedure followed and assumed responsibility for these evaluations. Children in Class V-1 also made a routine of calling for evaluations of the "newscasts" which were given daily by volunteers. Children in Class V-2 regularly evaluated the entire day's activities in a short period just before going home. This evaluation also showed a rather definite pattern and was presided over by a child. Class I-1 was the only situation visited where no routine evaluative procedures were detected. It should be clearly understood that these routine evaluations in no way crowded out spontaneous evaluation in any one of the six classrooms.

Developing Desirable Group-Work Habits

Children obviously need guidance in learning to work together. It is no simple task for a young child to become a successful group member. It is essential that the teacher recognize her responsibility for helping children learn desirable group-work habits.

The problem of developing desirable group-work habits can be separated from that of developing leadership only in a highly artificial manner. Therefore, this section of the present report and the one which follows must be considered together if a distorted presentation of the problem is to be avoided.

All six of the co-operating teachers indicated that they had definite plans for helping children learn to work in groups. A consistent philosophy was found underlying the work of all six teachers, and the problem seems to be basically the same on all grade levels. However, the teacher must adapt her application of this basic philosophy to the

maturity of the children in her classroom. For this reason, the problem is considered by grade levels. Each teacher's discussion of the problem is briefly reported, and some examples of group work on each grade level are given.

In the first grade.—The teacher of Class I-1, when asked how she helped children grow in their skill in group work, immediately stated that she felt the teacher's example was of primary importance; for example, she tried never to contradict a chairman nor question his authority when he had been given a definite responsibility or authority. She attempted to make suggestions to a child as she would to an adult. In the second place, she found it necessary to set up definite standards for group work with the children and then to evaluate their work in light of these standards. Her third point was that the whole program of developing good work habits was interrelated with that of training leaders. She further pointed out that it was just as important to train for following as to train for leading. She attempted to balance discussions of a chairman's responsibility with discussions of how children can help the chairman. A fourth point she made was that responsibilities should be rotated among the children, that a child's role should never become fixed. Her final point was that it is absolutely essential that children understand what they are to do and how they are to work if they are to do good work in small groups.

The teacher of Class I-2 stated that her first step in training children in group work was to do over-all planning with the class. At this time the entire class worked on group standards which were put into chart form. At first she gave children very short periods for group work and was available to help all groups at anytime with their problems. Very soon she introduced the use of group chairmen. The group chairmen were primarily responsible for passing out materials, and it was their responsibility and privilege to come to her on behalf of the group at anytime a problem arose. In general, she felt that the problem of training children in group work was primarily that of setting standards and training leadership. She stated that she had noticed considerable positive carry-over into reading and arithmetic of gains made in learning to play together, and she pointed out the contributions that an adequate physical education program can make to group-work habits.

Both first-grade classes evidenced exceptionally good group-work habits. During the four full days spent in the first-grade classrooms, not a single example of personal conflict between group members was observed. The apparent attitude of the group chairmen was most com-

mendable. Without exception, the chairmen appeared to serve with unusual modesty but with complete confidence. All group members were cooperative.

The observer attempted to note occasions upon which children appeared to work poorly because of lack of understanding of the task to be done or inability to do the work. Not a single case of this kind was observed. In general, the level of interest appeared high, and the children used their time well.

The observer was impressed with the consistency and skill with which both first-grade teachers made assignments perfectly clear. The children consistently knew what work they were to do.

At only one point did the children's group-work habits appear to break down at all. In both classrooms, the interest of the children in group work seemed to weaken toward the end of the reading periods. There was no lack of co-operation nor disorder, but the observer was of the opinion that the children began to tire before the periods were over and was led to question long group-work periods for first-grade children, even when groups engage in a variety of activities.

The high quality of group work of which six-year-olds are capable can be illustrated best by giving examples of group work observed:

1. One boy and six girls in Class I-1 played arithmetic games with flash cards for approximately twenty-five minutes. The children took turns being leader and choosing games. Interest remained high, and no disorder was observed. There was no adult supervision of the work.
2. Group 4 of Class I-1 moved their chairs into a circle and took turns reading orally from their basal text. The group chairman directed the work. Children gave help to one another when it was needed. This work in no way disturbed children who were doing other types of group work. While these children were reading together, the teacher gave her attention to basal reading instruction for another reading group.
3. After reading an assigned story as a background for a dramatization, Group 2 of Class I-2 was given permission to go into a vacant room to plan their dramatization without any adult supervision. The observer watched this group work independently for about ten minutes. During this time, the children worked with unusual seriousness of purpose and without personal conflicts on a task which appeared rather hard for them. Later, after the observer left the group, a member of the group came back into the classroom and reported that the group "needed help." The teacher excused herself and went with the child. It appeared significant that the children recognized their need for help.
4. Children in Group 4 in Class I-2 worked well in reading workbooks for sixteen minutes. During this time children helped one another frequently with absolutely no confusion and without disturbing other groups.

In the third grade.—When the teacher of Class III-1 was asked what steps she had taken to help children work together better, she said that the class frequently discussed what it meant to work together and set up standards which they attempted to follow. She had found most helpful a chart which the children had written and given the title "How We Work in Groups." She tried informally but consistently to help children evaluate their group work in the light of these standards. She made a second point that it was absolutely essential that the children be capable of doing the work expected of them. She considered it very important to be certain that tasks are very simple when group work is initiated.

The teacher of Class III-2 had developed a thorough plan for training children in group work and listed four points which she considered important. She initiated her discussion by saying that she was convinced that what the teacher does is of primary importance and that a teacher can develop desirable personal relations in a group only when she sets a pattern of respect for individual children and their work. For example, she said that she tried very hard to give her complete attention to a group when she was working with them and to make the children feel that she was not hurried and recognized the importance of what they were doing. She stated that a teacher frequently gives children the impression that she wants to help them but that she just doesn't have the time to do it. In the second place she pointed out the importance of training leadership. She had tried to use a definite plan for developing this leadership. A third point she made was that she felt the leader's responsibility should be matched with authority. She stressed with the class the importance of getting suggestions from the group and if possible reaching group agreement. However, groups did not vote on matters. The leader of a group was urged to respect the opinion of group members and to listen to their arguments, but in the end the leader decided what type of report was to be made and even had the authority to say to a child "I am sorry you cannot co-operate and it will be necessary to leave you out of the report." The teacher did not question such use of authority on the part of a leader. In the fourth place she indicated that she had worked with the class as a whole on standards. The children had worked out standards for the room and she had found it helpful to simply call a child's attention to the chart displaying these standards. She provided for periods of evaluation daily.

Class III-1 and Class III-2 had developed very good group-work

habits. No example of lack of co-operation or personal conflict was observed. Children worked well and in a purposeful manner. Some restlessness in Class III-1 was observed after a rather long work period one day. At no other time was there any indication of poor group-work habits.

A most interesting characteristic of the group work in these two classrooms was the high degree of interaction between group members. In this respect, the work of these eight- and nine-year-olds was in contrast with the work of the younger children who were more likely to engage in parallel activities as they worked in groups.

Specific examples of group work observed serve to illustrate the quality of the group work these eight- and nine-year-olds were doing:

1. Group 5 of Class III-1 completed illustrations of a story and decided to go outdoors to read orally. They sat in a circle under a tree and read orally and seemed to enjoy the activity. They were orderly and business-like. They frequently stopped and discussed the story they were reading.
2. Group 3 in Class III-1 worked resourcefully and made original costumes for a play which they gave as a reading report. This work was done during the reading period without disturbing other reading groups.
3. The "Southwest Group" of Class III-2 was told that they would have an opportunity to answer some of the science questions that had been raised in class. Every child in the group worked hard for approximately fifty minutes doing research reading in the classroom library.
4. After definite arithmetic assignments were completed, children in Class III-2 formed their own small groups and began playing various arithmetic games. There was no wasted time nor confusion.

In the fifth grade.—The teacher of Class V-1 made a number of very definite statements which indicated she had a thoroughly considered plan for training children for group work. First, she made every effort to constantly increase the responsibility the children were expected to assume. Second, she was very careful to see that there was time available to do the work assigned. She found it desirable to have a great many flexible periods. Third, she pointed out the importance of training for leadership. She had found individual conferences extremely helpful in this respect. Fourth, she had found it necessary to use shorter work periods and to work with groups rather closely when initiating group work and to rotate groups for her undivided attention at this time. Fifth, she believed the whole problem of training in group work was completely tied in with training in evaluation.

The teacher of Class V-2 also pointed out the relationship existing between good group work and good leadership. She found it necessary

to give a great deal of attention to training for the chairmanship of a group. She further pointed out that it was absolutely necessary that children definitely understand the tasks before them and desirable ways of working. She indicated that she felt it was absolutely essential that appropriate tasks be selected. She stated that the teacher has the responsibility for knowing exactly what each individual child is doing in each group and for finding appropriate assignments for each child. She pointed out the contribution that adequate informal records could make to good group work; for example, she attempted to check all work done very carefully in order to know very specifically what difficulties each child had.

Specific examples of group work observed will illustrate the level of group-work habits pupils in Class V-1 and Class V-2 had developed:

1. Children in Class V-1 worked on reading assignments for nearly fifty minutes in three groups under the direct supervision of group leaders. Not a single incident of disorder, lack of co-operation, personal friction, or waste of time was observed. The preparation for this period included a brief reference to the reading assignments and individual conferences with group leaders which the teacher had held while children were working in arithmetic groups. Each leader cared for materials, directed a word study, guided the reading of the story, and led in the planning and preparation of a reading report. The teacher spent most of the time with one group but never took the role of leadership from that group leader.

2. The teacher of Class V-1 began an arithmetic lesson by asking to see the hands of all who had completed their arithmetic assignments and indicated that she would work with one group. She worked with ten children who were studying decimal fractions. The rest of the children worked very well with such independence and with so little attention from the instructor that the observer was unable to understand just what they were doing. The teacher later explained that all groups were given arithmetic assignments by the week and that each child understood what he was to do.

3. Some members of Group 3 of Class V-2 went into a vacant room to plan a report. When the observer joined the group, a spirited but sensible discussion of the advisability of planning a costume play was in progress. The group finally decided to have a costume play and solved the problem of those who knew they could not get costumes by letting them be guards in the play.

4. At the same time the work referred to above was in progress, other members of Group 3 were making written reports, Group 2 was outside planning a report, and Group 1 was reading orally. All children were working in an orderly, business-like fashion.

Pupil-Teacher Planning

Observations and interviews pointed to the contribution made to group work by pupil-teacher planning. Although setting standards is an integral part of teacher-pupil planning, there are other aspects of such planning which contribute to the success children have as they work in small groups. In the situations studied, a consistency of underlying philosophy was noted. Adequate teacher-pupil planning leads children to understand both what they are to do and how they are to work in intraclass groups, and such understanding is essential to successful group work. The interviews with teachers gave evidence that the teachers appreciated the relationship between teacher-pupil planning and success in group work.

In the first grade.—In the situations studied, the first-grade children were given frequent opportunities to take part in planning their activities. Necessarily their planning was simple, and they received a great deal of guidance from the teacher. Occasions were noted in both rooms of children planning activities for the entire class. However, it was as the children planned their smaller group activities that there was evidenced the highest degree of skill in planning together. These first-grade children understood that there were certain things that they were to do more or less independently while the teacher worked with other reading groups. These children also understood that they had a rather wide range of choice of activities when these assigned tasks were completed. This choice of activities frequently gave rise to the necessity for children to plan together. Frequently two or three children would spontaneously plan together to work as a small group sharing materials. An example of such planning is cited:

> When she put down some number stencils she had taken from a cabinet, a child in Class I-1 indicated to others at the table that they could use the stencils. Several children began discussing them and agreed upon ways of sharing them.

An even higher level of pupil participation in planning was required for successful preparation of reading reports. These first-grade children had learned to think of their sharing of reading experiences with others as reading reports. Even the simplest of these reports required rather complex planning. Even illustrating a story called for some agreement as to the parts of the story that different children were to illustrate. One rather immature group discussed this problem with the help of he teacher while they were seated in a reading group before they began

the actual illustration. On the other hand, a more advanced group of readers in the same room solved the problem by themselves. The first-grade teachers consistently worked with the groups as they made a decision about the general nature of the reports to be made, but after the teachers and pupils set up the general framework, the groups worked rather independently.

Two specific examples of teacher-pupil planning observed illustrate the varied nature of such planning. The teacher of Class I-1 suggested to an arithmetic group some specific games that could be played with number cards and left the children to decide which games they would play. They made the decision successfully, and the work progressed smoothly. The teacher of Class I-2 asked a child to help the children decide what games the class would play first during the physical education period. The child later asked the class for suggestions. As a number of suggestions were made, the teacher called the leader's attention to the fact that one game had been suggested most frequently, and the leader indicated that would be the game the class would play. These two examples are typical of the planning that was involved in setting up the general framework within which children worked.

There were occasions on which teachers and pupils together had to plan in much more detail than is indicated above. The children of Class I-2 dictated to the teacher a letter which they wished to send to a child who was sick. As the children dictated the letter, the teacher wrote it on the board to be copied. The pupils and teacher together discussed some of the things that should be kept in mind as the letter was copied. A similar incident was observed in Class I-1. These children decided to write a birthday greeting. Before they started writing, the children decided what words they would want to know how to spell and the teacher wrote these words on the board. In Class I-1, plans for the physical education period demanded some attention be given to detail. The "assistant teacher" indicated that the group would play "birds." The teacher called attention to the fact that it would be necessary for the children to have definite assignments. Before the children left the room, each table had been given a definite assignment. The teacher then called the attention of the class to the fact that part of the school ground was muddy and it would be necessary to choose a path to the paved area with care. A child suggested that they would be careful to follow the leader.

A reading group in Class I-2 illustrated the high level of pupil planning that could be done independently by children. The general frame-

work within which the children would work had been set up, and the group members knew they were to dramatize a story. The children, without adult assistance, planned a rather successful dramatization. Surely this type of planning could only have come out of working in small groups.

The incident referred to above also illustrates the fact that group work can give rise to need for pupil-teacher planning to solve problems. After the group had planned the dramatization, a child reported that he didn't think the play was satisfactory and didn't want to give it. The teacher and children recognized this problem and, under teacher direction, arrived at a satisfactory plan. The group agreed to give the play, and the whole class agreed to make suggestions for improving it. Immediately the class began working toward plans for presenting the play to the other first-grade class in the school.

In the third grade.—In general, the teacher-pupil planning observed in the third-grade classrooms paralleled that observed in the first-grade classrooms. The third-grade children simply worked with more skill, and it was not customary to set up quite as restricting a framework within which to plan activities. For example, in both classes reading groups decided without the teacher's guidance what type of reading reports would be made whereas in the first grade the teacher played a major role in making such decisions.

It is also possible for children of this age to plan for a longer period of time. There was an interesting difference in practices observed in the third-grade classrooms. The teacher and pupils in Class III-1 planned activities for a single lesson at one time; for example, they reviewed plans for the arithmetic lesson at the first of the period and at a different time reviewed their plans for reading. On the other hand, the teacher of Class III-2 went over plans for the day in a general way early in the morning, and then each period was planned in more detail as the day progressed.

In neither classroom was any reading, arithmetic, or physical education lesson observed that was not preceded by a brief period of planning. During these periods of planning, the teacher played a major role, but children were definitely encouraged to ask questions or make suggestions or criticisms. A description of the planning of an activity period by Class III-2 may serve to illustrate the quality of planning that may be expected of children. The children apparently entered into the period of planning with an understanding that they were free to choose the activities they would engage in, that facilities made it im-

possible for more than a limited number of children to engage in some activities, and that certain groups should be given an opportunity to choose activities first. In general the framework within which the children were planning involved these three factors. It was understood that children who were expected to make reading reports had the privilege of choosing activities first, for the class had learned that frequently it was desirable to use this time to work on reports. The children further realized that only a limited number of children could use the wood burning tools or find adequate space for painting. Under the teacher's leadership, children indicated their choices of activities and decided where different groups would work and who would serve as leaders in the various groups. Next the teacher indicated that she felt it would be well for them to discuss one of the activities that had been selected. A most interesting discussion of some of the designs that children had made followed. Some very constructive criticisms were made, and the children received valuable help with techniques.

In the fifth grade.—Pupil-teacher planning was on a very high level in the two fifth-grade classrooms. The same general principles underlie pupil-teacher planning here as in the case of younger children, but these children worked on a higher level of efficiency. Teacher-pupil planning varied a great deal in many characteristics. Some planning involved the teacher and pupil leaders rather than the whole class or even a group; for example, the teacher of Class V-1 used planning periods with leaders most effectively. It has previously been pointed out that she regularly and systematically had conferences with reading and physical education leaders to plan the work to be done in reading and physical education. Planning varied from simple discussions of the plans outlined in general to very detailed planning. The written assignments on the board for reading groups illustrate one extreme, and the planning done for physical education by group chairmen illustrate the other extreme.

The teachers reported that planning could be for a period as long as a week or for a short, specific period. The teacher of Class V-1 regularly made all arithmetic assignments for the week. At the first of the week, pupils and teacher together went over these plans. On the other extreme, some planning involved no more than choosing teams for a single physical education period.

The teacher's role at this level is frequently that of clarifying the problem before the class; for example, the teacher of Class V-1 brought up the problem of some binder twine that a child had bought for the

class to use in some craft work. After presenting the problem, the teacher tactfully withdrew from the group discussion, and the children planned through to a solution. After a rather full discussion, the children decided to reimburse the child from the class treasury and to ask children who used the twine to reimburse the treasury to the extent that they felt they could.

A similar example of planning was noted in Classroom V-2. During a discussion of the significance of physical-political maps, several children expressed the desire to make relief maps using a flour and salt mixture. The teacher refused to accept a "snap decision" to undertake this job and pointed out problems of materials and time. A class discussion followed, and the children themselved decided that those children who were interested in the project could give it careful consideration and would be allowed to enter into it if they could be certain that they could carry it through to completion.

The teacher of Class V-2 described the planning involved as the children worked on a unit on "Other Americas." First, the whole class listed things they would like to know and finally organized their thinking by studying the list and suggesting things they would like to know about each country. Next, the class was faced with the problem of how to get the information they needed. The children decided to work in pairs as they hunted the information, and children volunteered to accept certain responsibilities. After a period of time during which a background of information was built up, the children again came together and made further plans. At this time, the children decided to work together in three groups: one group to work up a report on Alaska and Canada, one to report on Mexico, and one to report on South America. After this decision was reached, the children worked together in groups planning their reports. This planning was typical of both pupil-teacher planning for group work and pupil-teacher planning growing out of group work.

Developing Pupil Leadership

It is essential that leadership be developed if children are to work successfully in small groups. The six co-operating teachers gave expression to parallel philosophy. Without exception they accepted the fact that it was their responsibility to plan to help children develop qualities of leadership. A high degree of parallelism in the techniques which they utilized to develop leadership was also noticeable. However, a close

examination of available information does show that the techniques have to be adjusted to the maturity of the children in the class.

In the first grade.—The teacher of Class I-1 gave responsibilities to both group chairmen and table chairmen. Group chairmen were responsible for the activities of reading groups while the table chairmen were primarily responsible for the behavior of the children seated at their tables. The teacher was especially careful to give the group chairmen special help in preparation for their responsibilities. She found it helpful to go over new words in assignments with these children before group work was begun. While discussing problems of this type with a chairman, she frequently made suggestions for ways in which he could help members of his group. She pointed out a specific example. She told Marsha that she might help Oscar by letting him read to her some. The suggestion was followed, and Marsha had frequently taken Oscar aside to let him read to her. Both of the children had enjoyed the experience and had profited from it.

Group chairmen were responsible for checking with their groups to be sure all required work was in. In turn, they took up this work and gave it to the teacher. She pointed out that well organized and adequate storage space made it possible for group chairmen to accept more responsibility. She was careful to rotate the roles of leadership among the children in the class, for she believed it was essential training for all children. She also indicated that a child had to understand clearly what was expected of him to be successful in a role of leadership.

This teacher also appointed a child who was called an assistant teacher. She asked this child to assume different responsibilities from time to time; for example, it was her assistant teacher who customarily presided over "Show and Tell" and who was most frequently asked to run errands or even make minor decisions for the group.

Observations in classroom I-1 indicated complete harmony between the teacher's expressed philosophy and her classroom practices. During both observations, the assistant teacher definitely assumed a role of leadership during the "Show and Tell" period, calling for contributions from the children, assuming responsibility for timing the contributions, and occasionally making statements which showed a spirit of evaluation. Consistently, the group chairmen in this class conducted the group reading reports and any evaluation following the reports.

The observer watched the assistant teacher decide that the group would play a game called "birds," give bird assignments to each table, and send the groups by tables to the playground.

On another day, the assistant teacher asked the children what game they wanted to play. A number of children indicated they wanted a free play period. The assistant teacher agreed and selected two boys to go for balls and other desirable play equipment.

Before the children began working in their arithmetic groups, the children discussed the responsibility of group chairmen, and then the teacher suggested some games that could be played with number cards but indicated that it was up to the group to select the games they would play. Group chairmen got out the necessary materials for the groups and initiated all group activities.

It was interesting that both the children and the teacher in Class I-1 used the leaders' names to identify the groups; for example, they spoke of "Roberta's Group" or "Marsha's Group."

In discussing her work, the teacher of Class I-2 emphasized the importance of giving very simple roles of leadership to the young children. Soon after reading groups were organized in her class, she had found it desirable to appoint group chairmen who were given two very definite and simple responsibilities. They passed out all materials and were privileged to come to the teacher when a problem arose in a group that the children could not solve without her help. She felt that this plan not only trained leadership but was efficient in helping to establish situations within which good work could take place. She expressed a conviction that no child should be given a role of leadership beyond his capacity for succeeding in that role. She believed that it was wise at times to take tactfully from a child a role of leadership rather than to let him fail in that role. She told of one girl she had twice given the opportunity to serve as hostess for the room and from whom she had to take the privilege because the child could not carry the role satisfactorily. She was very pleased that this same girl had just completed serving as hostess satisfactorily for one week. She pointed out that the child probably would not have had this success if she had been allowed to fail in the role earlier in the year.

This teacher also appointed group chairmen and room helpers. The responsibilities of the group chairmen have previously been indicated. The duties of the room helpers varied. These children served in specific capacities such as hosts and hostesses in the lunchroom. The teacher said that she had found children developed more leadership when they were appointed as a helper of a group than when they were appointed to take care of specific materials, such as paints, clay, etc. She believed

a child's attention is focused upon the group and that he develops more qualities of leadership as a group leader.

This teacher's practices were also brought into harmony with her expressed philosophy. Children consistently cared for the materials they used. The observer noted that she asked group chairmen for checks upon group work rather frequently.

Ricky's direction of his group's reading report was typical. He pointed to questions on the board and then called on different children to answer the questions. The children gave their answers by showing appropriate pictures. After the children had shown the pictures, Ricky asked, "Who has a suggestion?" A child suggested that they should select one of the pictures for the mural. The suggestion met with approval and the class voted on one to be used.

At one time while she was working with Group 3, the teacher stopped her work and told Group 2 that the group could go into the music room to practice for their play. She asked Pat of Group 1 to go with them and help them by acting as announcer. The observer followed the group and found Pat assuming a rather aggressive role of leadership which was nevertheless accepted by the other children. This incident would seem to indicate the possibility of giving to some children rather difficult roles of leadership and the fact that some group work is possible for children when there is strong leadership that would be impossible without this leadership.

At one time, Buddy was asked "to take charge of suggestions for physical education." Under the child's leadership, the class made decisions. This incident illustrates the utilization of opportunities for developing leadership that are frequently overlooked as well as the simplicity of leadership roles which can be given children. It would have been very simple for the teacher to have called upon children for suggestions, but she gave the situation an entirely different slant by assigning a child a role of leadership.

In the third grade.—The teacher of Class III-1 found group work in reading presented many opportunities to help children develop qualities of leadership. Each reading group had a leader who served for a week. The teacher found it helpful to talk to these leaders each morning before school. This was possible since the children nearly always came early. During this organization period, she tried to have a conversation with each group leader. The new words to be presented were checked with him to be sure he had a clear idea of what was to be done, and other help was given.

Although this teacher had not made a regular practice of doing so, she had found it helpful at times to give the leaders written suggestions. The children and the leaders understood their working procedures thoroughly. It was the general practice to have individual study precede group work, and the group leader for the week decided when the group had had adequate time for this type of study and was responsible for getting the group together to plan reports.

This teacher pointed out that she felt one of the greatest contributions of small group work was its development of leadership qualities in children and that children could assume roles of leadership in small groups that were impossible when the class worked as a whole.

Observations in this classroom showed that children consistently presided during the "Show and Tell" period and during all group reports. One morning, a child was observed conducting the "Show and Tell" period while the teacher gave her undivided attention to other activities.

On another occasion when a group was given permission to go outside to read together orally, the group leader led the children from the classroom and definitely assumed responsibility for the direction of their oral reading. Later, a second example of children in this class working very well outside under pupil leadership was noted.

At one time the teacher of Class III-1 gave the role of group chairman prestige by commenting to the class that the group chairmen had gone over plans for their groups before school and would certainly be able to direct the work of their groups well.

The teacher of Class III-2 also used group chairmen whose responsibility paralleled closely those described for chairmen in Class III-1. This teacher explained that she appointed leaders for only a day at a time when groups started working together but that leaders were allowed to serve for a week after the children developed some skill in the use of constructive criticism. She believed children are able to see progress in their own leadership within a week after they develop some capacity for criticism. She stated that children frequently realized they could have handled a situation better as a leader and that they should have the opportunity to profit from such self-criticism.

It was interesting to observe that this teacher was careful not to take the role of leadership away from a child when she joined a reading group. One lesson may be described to illustrate this point. The children had been told that there would be no group reports given on this particular day because the time would be used to go to the projection

room to see a film which was available only for the day, and the "southeast" group had been told they could read certain stories "just for fun." After the pupils in this group had read silently for sometime, the group leader got the children into a group for oral reading. The children read well and with apparent enjoyment. The teacher joined this group, appeared to enjoy their stories, but never once detracted from the leadership role of the group chairman.

The teacher told of an interesting decision a child had made. She became curious about how a group was going to be able to report since the children had not gotten together. When the leader was asked about this, she explained that she had not seen any reason for getting the group together since the story was to be illustrated for the group report and all the time was needed for preparing the illustrations. She explained that she had individually gone to each child and asked him to illustrate a part of the story. This technique had not been used before.

Observations indicated different techniques used in selecting different leaders. During the organization period on a Monday, each child who had been a "helper" the week before chose someone to take his place. At the same time the teacher appointed the room chairman for the week. After the "Show and Tell" period, the teacher indicated that their first job was the appointment of group chairmen. Individually, she called each group chairman to her, and she and the child working together appointed the incoming chairman. She later explained that the children needed some guidance in making these choices and that she could make a contribution by having available a complete record of the various appointments that each child had been given.

Observations in this classroom also revealed times when children were asked to be leaders for specific activities; for example, the teacher put a star by the name of one child in each activity group to serve as chairman. She also selected children to be in charge of groups during the physical education period; specifically, she indicated that they would practice pitching and batting and asked three children to be in charge of groups practicing pitching and two children to be in charge of groups practicing batting.

In the fifth grade.—The teacher of Class V-1 worked consciously to develop leadership on the part of the children in her class. Her reading group chairmen were given a great deal of responsibility. These chairmen were appointed by outgoing chairmen. The teacher regularly had individual conferences with these chairmen the day before they were to be responsible for group work periods. It was their responsibility

to be completely familiar with the materials to be covered in the class meeting. The morning before the work period, she again checked with each chairman. The leaders were responsible for the behavior of the groups, the activities they engaged in, and the materials they used.

This teacher also used the physical education period for developing leadership. Boy and girl leaders were appointed each week to have charge of the physical education program. These children were responsible for planning work for their groups. Each leader appointed two captains to help with the work. Before any game was played, the teacher met with the leaders to be sure they understood the game. Frequently captains had gone to play a new game with a sixth-grade class as preparation for teaching it to their groups. On Monday a new game was customarily taught, and the leader's role was most important at this time. The leaders planned with the teacher a week's work in physical education. The plan for physical education appeared to work very smoothly. When time for physical education came, it was observed that the teacher only told the leaders that it was time for the physical education period and asked them to lead their groups from the room. All explanation came from the leaders, and group leaders supervised all activities. Children also conducted the business meeting each morning, and reading-group chairmen had charge of all reports.

An example of pupil leadership during the reading period may be given. The teacher indicated to the children that she wanted their attention. As soon as all were quiet, she directed the leaders of the reading groups to get their materials. The leaders brought the correct number of books and word lists. She then told the leaders to take charge. No other directions were given. Reading assignments were on the board and had been referred to during the organization period. The chairmen had absolute charge of the work. The teacher did check with the chairmen to be sure that their reports were fully planned.

The use of group leaders during the reading period was also customary in Class V-2. The teacher also indicated that children frequently assumed chairmanship of special interest groups in social studies, science, or physical education.

It is probable that the group chairmen in this room were not given quite as much responsibility as the ones in the other fifth-grade situation studied. There was certainly not as highly systematized plan for individual conferences with group leaders. This teacher placed a great deal of emphasis on self-direction and individual work. This fact may explain why the role of the reading group chairmen seemed a little

less important in this class. However, observations revealed children acting as leaders frequently and ably. The teacher pointed out that it was very necessary for tasks to be appropriate if children were to act as leaders. She also indicated that she stressed with the groups the importance of co-operation. A child in the class regularly conducted the current events period each day. One observation may be cited which indicated that the children respected their peer leaders. The teacher called attention to the fact that two reading groups had been given an exact assignment because of the excellent material to be read. A child questioned how two reports could be given on the same material, and another child suggested that the two group leaders could get together and decide upon different types of reports. The class seemed happy with this suggestion, and the decision was left up to the group chairmen. At the first of the reading period, the teacher had called attention to the fact that the group leaders were to help their groups decide upon the nature of the reports to be made. Calling attention to this responsibility of the group leaders seemed to give their role prestige.

Maintaining the Unity of the Class

Working in small groups should never weaken the unity of the whole class. It is highly desirable for children to consider themselves primarily as members of the class group. It is also desirable for the class group to learn to function as a unit, for certain types of desirable activities can be engaged in only when the class functions as a whole.

No one of the teachers indicated that she had given any conscious consideration to this problem. However, observations in the classrooms clearly indicated a desirable sense of unity. Therefore, it would seem well to analyze the prevailing practices in grouping for factors which may have brought about such class unity.

This unity appeared to be brought about in three ways: (1) In all six classrooms there was some balance between small group, individual, and class work. (2) In all classrooms the use of multiple groupings appeared to contribute to the unity. (3) The frequent use of group reports to the class as a whole contributed to class unity in all six classrooms. Other minor techniques for developing this unity were observed.

A balance of individual, small group, and class work.—The children in all six classrooms were accustomed to working as individuals, as members of small groups, and as members of the class group. A study of the schedules followed in a flexible way in the six classrooms gave some

indication of the provisions for the three types of work. However, the schedules cannot be analyzed in such a way as to give definite statements as to the proportion of total time spent working in these three ways.

The schedule followed by both first-grade classes provided for one hour and fifty minutes daily for instruction in reading, social studies, science, and language arts and forty minutes for instruction in numbers. Therefore, two hours and thirty minutes a day would be the maximum length of time that children could have worked as members of semipermanent intraclass groups. This maximum may point to a greater amount of time spent in group work in these areas than was actually the case, for much time was customarily spent in planning, evaluating, and reporting group work, and when such work was done the class was customarily the unit.

The schedule for the first-grade classes indicated no individual work periods, but observations showed that the children actually worked as individuals much of the time in reading groups when they were not under the direct supervision of the teacher; for example, on one occasion reading Group 2 of Class I-1 formed a circle without the teacher's help, read a story orally, and then went back to working as individuals in workbooks. On the other hand, reading Group 4 in Class I-2 asked the entire class to help them select the pictures to use for a picture show. A balance between individual, small-group, and whole-class work can be maintained even during periods set up primarily for small-group work.

The schedule followed by Class III-1 provided for two hours and ten minutes for children to work in the area of language arts and twenty minutes of physical education. It would be during this total of two hours and thirty minutes that the semipermanent intraclass groups of Class III-1 would function. There was also a twenty minute period scheduled for free play which might be considered a period for individual activity. No other periods were labelled in such a way as to indicate they were set aside for individual work. The observations of these children working in groups indicate the same type of balance of activities that was found in the group work in the first-grade classrooms.

The schedule of Class III-2 provided for one hour for silent reading in groups and forty minutes for making reports. It also provided for one hour of arithmetic. It would be during these periods that the semipermanent intraclass groups would work. This schedule also provided for thirty minutes for activities. Children chose the activities to engage

in during this period, and the teacher reported that frequently groups developed on the basis of interest. On the other hand this period gave children time to work individually if they cared to.

The schedule followed by Class V-1 provided for one hour for arithmetic and one hour and thirty minutes for social studies, science, language arts, and arts and crafts. It was during this period of two and one half hours that the semipermanent intraclass groups functioned. This schedule also provided for a period of one hour for individual help. The teacher of the class described this period as a "definite period in which all children are engaged in research, special projects, and special assignments." Further provision was made for a thirty minute period for "quiet activities" following the noon hour. The teacher commented that she considered this one of the most valuable periods in the day because of the friendships which developed from the opportunity children had to get together in natural groups for activities of their own choice.

The schedule followed by Class V-2 provided for one hour for instruction in language arts and one hour for arithmetic. Therefore, there would be a maximum of two hours that the children could work in semipermanent intraclass groups in this class.

The teacher of Class V-2 pointed out that a balance in individual and group work was maintained in the area of social studies and science over a period of time rather than in a given day. In general, the class functioned as a whole, when children planned work, shared information and ideas, and evaluated work, and they worked as individuals and as small groups when gathering information and planning reports.

The use of group reports.—The use of group reports seemed to be a very efficient technique for developing class unity on all grade levels. It was customary in all six classrooms for reading groups to report back to the class as a whole. Therefore much of their work in small groups was motivated by a desire to share with the class as a whole what was read, and the reporting and evaluation of the reports gave the class opportunities to function as a whole.

It is interesting that no one of the teachers utilized group reports as a technique for instruction in arithmetic.

Observations in the six classrooms revealed many interesting examples of group reports. On one day a reading group in Class I-1 reported by showing "dictionary pages" that they had prepared while the other groups told the stories they had read by series of illustrations giving the stories in sequence.

After Chris in Class I-2 brought some tadpoles to class, the teacher suggested that a group might like to make a report on tadpoles, and said that there was a story that could be used for such a report. She further suggested that perhaps Chris's group might like to make the report. Chris's group accepted the responsibility and appeared to be very interested in developing a good report to give to the class. On the same day that this group reported, a second group reported by showing illustrations for a story. On the second day of observations in Class I-2, a group worked on a picture show to show the class, and a second group prepared a dramatization for the entire class.

In Class III-1 it is customary for reading groups to report every other day. On the alternate days groups are given assignments such as work sheets, questions to answer, etc. On the first day that observations were made in this classroom, one group reported by giving a play and two groups reported by reading their stories orally. On the second day three groups reported by reading the stories orally. The teacher stated that ordinarily the reports showed more variation than was observed on these two days.

The teacher of Class III-2 customarily had her groups report on alternate days. When reports were not made to the class, groups prepared what were termed "written reports." The plan of reporting was flexible as was evidenced by the fact that no group reports were made one day because the class wanted to see a film that was available for only a short time. On another day, two different groups reported on stories they had ready by showing a series of illustrations in sequence.

The teacher of Class V-1 had worked out an interesting plan which was followed in a flexible way by her reading groups. Monday and Wednesday were customarily used for preparing reports. Reports were made on Tuesday and Thursday, and Friday was a "choice day." To clarify the plan followed, the teacher gave the following outline of work which was actually followed one week:

Group III	Group II	Group I
	Monday	
Read story about "The Nose" to dramatize (Sight reading)	Read story about Chester Nimitz to hand in written report for Tuesday (Story of our times)	Read story about unit in progress

Group III	Group II	Group I
	Tuesday	
Presented a play interpreting "The Nose"	Handed in written report in neat form	Presented "20 Question" report
	Wednesday	
Read current events and wrote report	Read story about unit in progress	Read story to dramatize
	Thursday	
Handed in written reports	Round table discussion	Dramatization
	Friday	

Choice Day (planned as early as Tuesday or Wednesday)
1. Panel Discussion (by volunteers)
2. Dramatization (by volunteers)

The teacher of Class V-2 did not customarily have pupils plan and give reports on the same day, and two oral and one written report were usually given on one day. Reports following the reading of editions of the *Weekly Reader* and *Current Events* were observed. The children knew that a period of discussion would follow the reading of the different newspapers, but they did not plan specific reports. The teacher led the discussion. On another day one group prepared a "costume play," one group planned a dramatization, and one group planned a written report.

Grouping for specific purposes.—When different groups are set up for various purposes, grouping is less likely to interfere with class unity. The fact that children had been grouped in all six classrooms for specific purposes probably contributed to the maintenance of the unity of the classes. In all situations, teachers and pupils appeared to realize that all grouping was for specific purposes. There was no tendency to think of the class as a composite of a few well-defined groups. Each teacher worked with two semipermanent intraclass groupings, and frequently grouped children in other ways for specific activities.

Miscellaneous techinques.—Other miscellaneous techniques were observed which helped to maintain the unity of the class.

Working on a common task can draw a class together. The children in Class I-1, for example, wrote birthday notes to a child in the class during their group-work period. This common task gave children of all groups the feeling of working on the same level.

Bringing together groups that customarily work independently may serve to unify the class. The teacher of Class I-2 used intraclass grouping for most of her instruction in arithmetic, but occassionally she brought the class together as a whole for certain number activities. An example of this technique in operation was observed. The class as a whole enjoyed illustrating number stories on the felt board for a short while before they went into group activities. The teacher of Class III-2 also reported that she had arithmetic groups work together about once a week.

The temporary shifting of a child from one group to another helps to break down any tendency for groups to become inflexible and thus destroy the unity of the class. Examples of this technique were observed. The teacher of Class I-2 indicated that a group needed a narrator for a dramatization and that she was sure the group would appreciate Pat's leaving his group and helping them. The teacher of Class III-1 said that groups frequently "borrowed" children from other groups when they were needed for special contributions. She told of a group's "borrowing" a girl who had impressed the group with the way she had taken the role of a farmer's wife. The class considered it perfectly reasonable for this child to be asked to join a different reading group when it needed a farmer's wife for a dramatization. During one of the observations in Classroom III-1, Group 5 borrowed a boy from another group because the group needed another "man" for a play.

Two or more groups may be combined at times when it seems desirable to do so. This practice would appear to give the children the understanding that grouping was a means and not an end. The teacher of Class III-1 reported that she had frequently combined two of her reading groups when she was able to find material that was suitable for more than one group.

Selecting Appropriate Group Activities

All six cooperating teachers emphasized the fact that the selection of appropriate group activities is essential to successful group work. Classroom observations indicated that the teachers had selected activities for group work with skill and resourcefulness. The twelve full-day obser-

vations in the classrooms furnished many examples of appropriate group activities for children on the three grade levels considered.

Class I-1.—The teacher of Class I-1 regularly held her reading groups responsible for definite assignments which they worked on more or less independently. Such assignments had included writing notes, making greeting cards, using workbooks and worksheets, making booklets, illustrating stories, making dictionary pages, planning to read stories to the class, and preparing simple dramatizations. After required assignments were completed, children were free to select other activities such as playing with commercial and teacher-made games, painting, drawing, working with clay, reading library books, re-reading stories in textbooks, reading together orally in small groups, caring for pets, visiting together, and playing quiet games.

The arithmetic period was short and children were required to "stick with" jobs directly related to arithmetic. Children who were not working under the direct supervision of the teacher were usually given definite assignments in workbooks, on worksheets, and on the chalkboard. To care for the differences in the time required for different children to complete the assignments, the teacher used additional worksheets, easy pages in workbooks, counting objects, various types of number games, and arithmetic flash cards.

Below is a tabulation of the activities actually observed:

Reading-Social Studies Group Activities

First Day

All Groups.—Writing birthday cards to a class member: Acting upon the suggestion of a class member, the class decided to write birthday cards to Tommy. The teacher wrote words which the pupils said they would need on the board, and the class composed their own messages.

All Groups.—Reading under the direct supervision of the teacher.

Group 3.—Using workbooks: The teacher gave the group directions for this work while the pupils were in a reading circle, and the group then worked independently on the assignment. The workbook used was designed for use with the basal reader.

Groups 1, 2.—Using duplicated worksheets: Two different sheets were used. The sheets had been prepared through the use of commercially prepared master copies.

Groups 2, 4.—Reading together orally: The children in these two groups spontaneously and at different times formed small circles and read stories orally

Group 1.—Playing a game a child brought from home: At different times children in this group played with a game a child had brought from home.

Second Day

All Groups.—Writing birthday cards to a class member.

All Groups.—Reading under the direct supervision of the teacher.

All Groups.—Writing letters: The teacher explained that they needed to write a letter and wrote on the board:

May 16, 1951
Casis School

Dear Mother,

Will you help me look for school books?

Love,

All Groups.—Reading independently sliently: Many children chose to read stories from their readers for pleasure.

Groups 1, 2.—Illustrating a story: The children planned to illustrate the story they read while they were in the reading circle. Individual children agreed to illustrate specific parts of the stories.

Group 3.—Making a dictionary page: The teacher folded newsprint into sections, and the children wrote one word in each section and illustrated it. The words they used were written on the board.

Group 4.—Using workbooks.

Arithmetic Group Activities

First Day

Group 1.—Using workbooks: The children in the group were working independently and on different pages in a second grade workbook.

Group 2.—Using workbooks: The children in the group were working in a first grade workbook on a common assignment.

Group 3.—Playing number games: These children played with number cards designed to develop an understanding of grouping. The teacher worked with this group part of the time.

Second Day

No work in small groups.

Class I-2.—The teacher of Class I-2 followed the same general plan for her group work that was described by the teacher of Class I-1. Observations led to the opinion that this teacher probably placed more emphasis upon the required assignments and gave a little less time for free activities. In a discussion of this problem, the teacher did not indi-

cate that she had utilized any activities which have not previously been mentioned. Below is a tabulation of the group activities observed in Classroom I-2.

Reading-Social Studies Group Activities

First Day

All Groups.—Reading under the direct supervision of the teacher.

Group 1.—Reading independently for information to be shared with others: Children in the group were reading to make a report on tadpoles. On a portable blackboard, the teacher listed the information to be found in the story:

Tadpoles

1. Where you find eggs.
2. How tadpoles grow.
3. What they eat.
4. What tadpoles need when they get legs.

After the children read the story they prepared the information in picture form.

Groups 2, 3, 4.—Planning a mural: Children drew suggestions for a mural on insects which were later presented to the class for evaluation.

Groups 2, 3, 4.—Using workbooks: Children used workbooks designed for the basal texts the groups were using.

Groups 3, 4.—Reading to another group: The teacher explained to Group 4 that Group 3 would like to read to them. The children paired off, one child from each group, and read together. As each pair finished the story, the pupils went quietly back to their seats.

Second Day

All Groups.—Reading under the direct supervision of the teacher.

Group 1.—Reading independently for information to share with others.

Group 2.—Planning a dramatization: The children planned a dramatization, working much of the time in an adjacent room.

Group 3.—Using workbooks.

Group 4.—Preparing pictures for "a picture show:" Children worked singly or in pairs at the easel. Making a dictionary page.

Groups 1, 2, 3.—Writing a letter to a sick child: The simple letter was copied from the board.

All Groups.—Using pages in arithmetic workbooks: Three different workbooks were used. Since no explanations were made, it is assumed

that children worked in sections of the workbooks they were permitted to use independently.

Arithmetic Group Activities

First Day

The class worked as a whole.

Second Day

The only arithmetic work done was done during the reading period.

Class III-1.—The teacher of Class III-1 indicated that there were two types of activities that her reading groups customarily engaged in. Groups were frequently given definite assignments such as workbook pages, worksheets, or questions to answer. Such work furnished one type of group activity. Other activities grew out of the practice of making group reports. Reports had included such activities as illustrating stories, dramatizations, oral reading, story telling, and pupil-made picture shows. Pupils were allowed to select the nature of the reports to be made. After the work described above was completed, children understood that they would be allowed to select other activities such as working with various art media, doing individual research, and reading for pleasure. Below is given a tabulation of the group activities observed in this classroom:

Reading-Social Studies Group Activities

First Day

All Groups.—Working under direction of group chairmen: All groups worked under pupil leadership. Exact assignments were difficult to determine because they had been given to chairmen before school. Three groups gave oral reports; others prepared written ones. One report was a "costume play," and two took the form of oral reading. Some of the activities observed were making properties for a play, painting, reading orally to one another, practicing a play, illustrating stories, and silent reading of library books. All activities appeared to be directly related to reading assignments. The teacher spent her time helping different groups but never completely attached herself to any group.

Second Day

All Groups.—The same general plan was followed. However, all three oral reports took the form of oral reading. The use of duplicated worksheets was also observed.

Arithmetic Group Activities

There were no arithmetic groups.

Class III-2.—The teacher of Class III-2 indicated that the children in this class engaged in the same types of activities described by the teacher of Class III-1. She did point out that she used two types of workbooks, some designed to accompany basal readers and some designed to develop skill in dealing with phonics. In addition to the reports described above, she said that her pupils had also prepared radio programs, murals, quiz programs, and pantomimes as reading reports. Below is a tabulation of the group activities observed in this classroom:

Reading Group Activities

First Day

All Groups.—Reading independently and with the help of the teacher: The teacher explained that no reports would be given because of some desirable adjustments in the program. All groups were given assignments orally before any reading was done. Each child read his assignment silently before engaging in any other activities. The activities children chose were reading library books, hunting information in the encyclopedias, examining some vertical file materials, taking tests voluntarily in old copies of the *Weekly Reader,* reading orally in a group (apparently initiated by a group chairman), and using the dictionary (at least three different children).

Group 5.—Taking a test: The teacher motioned Group 5 to come to the reading table. After the group was together, she gave the pupils a test in the *weekly Reader.* (She explained this group needed experience in following directions before taking the spring achievement tests).

Second Day

All Groups.—Reading independently and with the help of the teacher: The work paralled the work done the day before. Two groups prepared illustrations for their class reports. One group prepared a bulletin board as a non-oral report. Rather extensive use of the encyclopedias was observed. No children took tests. The teacher divided her time between two groups.

Arithmetic Groups

First Day

Group 1.—Working under the direct guidance of the teacher: The teacher helped the pupils read directions in their workbooks and then led them to work out an outline of steps for working long division problems.

Group 2.—Working independently on a definite assignment in a workbook.

Group 3.—Working independently on problems which had been put on the chalkboard.

Second Day

Groups 1, 2.—Working together under the direct supervision of the teacher.

Group 3.—Using duplicated worksheets.

Class V-1.—The teacher of Class V-1 indicated that most of the group activities her reading groups carried on grew out of the practice of making reading reports to the group. She indicated that the reports her children made were the same as those which have previously been mentioned.

She said that most of the time spent in arithmetic groups was devoted to working on assignments in workbooks and on worksheets. Occasionally assignments were written on the chalkboard. She also provided various flash cards which children used for arithmetic games, and under the direct guidance of the teacher other types of arithmetic activities were introduced. This teacher made provision for an activity period rather than provision for children to engage in a wide variety of activities after definite reading assignments were completed. Below is a tabulation of the activities observed:

Reading Group Activities

First Day

No group activities observed.

Second Day

Group 1.—Reading for specific information to share with others: The group was expected "to add to the information the class had on first aid." The chairman first led a study of the words which appeared on the word sheet that had previously been discussed by the teacher and chairman. The group next read the story silently and finally left the room to plan a round table discussion.

Group 2.—Reading for appreciation and pleasure to be shared with others: The group read "The Pied Piper." The chairman directed word study, silent reading, and oral reading. The group then went outside to a paved area adjoining the room and planned a dramatization.

Group 3.—Reading material of general interest: The group read about a "cripple who became president." The work of the group was

largely under the direction of the chairman. It was impossible to determine the nature of the report the group planned without disturbing the work in progress.

Arithmetic Group Activities

First Day

All Groups.—Working on individual assignments: Each group had an assignment for a week. The children worked independently on these assignments. A number of children completed the assignments and began independent work on spelling, on letters, and on other tasks. (All assignments were in workbooks).

Groups 1, 3.—Working under the direct supervision of the teacher: The teacher asked Group 1 and later Group 3 to come to her. She gave these groups specific help on their assignments.

Class V-2.—The teacher of Class V-2 reported the same group activities that had been reported by the teacher of Class V-1. Below is given the tabulation of the group activities observed in this class.

Reading Group Activities

First Day

All Groups.—Reading newspapers: Group 1 read *Current Events,* Group 2 read the *Weekly Reader* written for the fifth grade, and Group 3 read the *Weekly Reader* written for the fourth grade. All children knew a discussion period for sharing information would follow the silent reading.

Second Day

Group 1.—Reading under the direct supervision of the teacher.

Group 1.—Planning written reports: After the work under the direction of the teacher was complete, the group read silently and later wrote answers to questions that had been presented.

Group 2.—Planning a dramatization: The group read silently and then went outdoors and planned a dramatization.

Group 3.—Planning a "costume play": The group read silently and then went into a vacant room to plan a play.

Arithmetic Group Activities

First Day

All Groups.—Working on assignments in workbooks: All assignments were written on the board. Three different assignments in two different books were made. When assignments were completed, children were free to choose activities such as drawing, painting, spelling, looking at their personal files of previous work, writing, and reading.

Groups 1, 2.—Working under the direct supervision of the teacher: The teacher called one group together at a time and gave them help on the arithmetic assignment.

Second Day

The lesson followed the plan reported above.

WORKING WITH SEVERAL GROUPS AT ONE TIME

The teacher who attempts to guide group work in the classroom is faced with the problem of relating herself to several groups working simultaneously. The six co-operating teachers were asked to describe the ways in which they met this problem. The classroom observations indicated that their various plans for working with several groups at one time were in successful operation.

Class I-1.—The teacher of Class I-1 worked alternately with the reading groups in her room. As far as it was possible she attempted to give her undivided attention to one group at a time. She customarily worked with one group at a time in a small reading circle away from the other groups working independently. Most of the basic instruction in reading was given to the children in this type of situation. She worked with every group in this way each day, and on occasions she even worked with a group twice in a given day.

Her general plan for working with arithmetic groups was similar to her plan for working with reading groups. However, she did not work with each group every day. Ordinarily, she worked with only two groups a day.

Class I-2.—The teacher of Class I-2 reported that she customarily worked with a single reading group at a time. All other groups worked on tasks which were well understood by them and which demanded a minimum of her time and attention. She made a practice of working with each reading group every day.

When children worked in arithmetic groups, she also attempted to give a major portion of her attention at one time to a single group. However, she did not work in this way with all her arithmetic groups in a single day, and frequently the class worked as a whole during the arithmetic period.

Class III-1.—The teacher of Class III-1 found that the use of student leaders facilitated the management of reading groups. Each group had a leader who served for a week and who was responsible for the direction of group activities. She made a practice of reviewing the plans for

the reading lesson with the class as a whole at the beginning of each period. As the children began working she made a practice of going from group to group until she was certain that all were working well before she attached herself to any one group. She did not make a practice of rotating groups for her undivided attention but attempted to move frequently from group to group to give the help that seemed needed. She often stayed with one group for a rather prolonged period of time, and she did find it necessary to give her slowest readers a great deal of attention.

This class had not been grouped for instruction in arithmetic.

Class III-2.—The teacher of Class III-2 said that she thought it was easy for a teacher to "spread herself too thin." This was her primary reason for having only half of the groups report on a given day. Such a plan made it possible for her to work closely with certain groups on given days. She attempted to give assignments to the groups not reporting that were definite and easy enough to be carried through with very limited assistance. She was therefore free to give most of her attention to the groups planning reports. At the first of each period, assignments were made and a period of silent reading customarily followed. The teacher considered this period for silent reading as "her time." This was a period when she went from child to child giving the help that seemed needed. She gave specific attention to children's word attack skills during this period. After the children began work on reports, she customarily spent the major part of her time with the groups that were to report to the class, but she had no definite plan for rotating the groups for her attention.

This teacher did not work with arithmetic groups in the same way she worked with reading groups. She did rotate arithmetic groups for her undivided attention. Usually she worked with one or two groups in a single day.

Class V-1.—The teacher of Class V-1 also gave the responsibility for the conduct of group work to the reading group chairmen. She held individual conferences at least twice a week with the chairmen and gave them detailed and specific help. She found that such a plan made it unnecessary for the teacher to rotate groups for her attention and freed the teacher to work with groups or individuals in any way she considered best.

At the first of each arithmetic period, the attention of the group was directed to the assignment. The teacher then gave the children about ten minutes to look over the assignment and ask for individual help.

The class understood that this was the time to ask for individual help and that later the teacher would be working with groups. Later in the work periods, children were allowed to help one another. After she was sure the children were working well on assignments, she would bring a group together and give them the group instruction she considered best. She made no attempt to work with every group every day.

Class V-2.—The teacher of Class V-2 began every reading lesson by a careful discussion of the assignments for the day and regularly checked to be certain that children understood what they were to do before any group work was initiated. As the groups worked together, the teacher never attached herself to any one group. She might sit down and work with one group for some time, but she never set up the pattern of rotating her work with them. She went from group to group giving the help that seemed necessary. She found it desirable to spend a great deal more time with the slowest readers than with the other groups.

In working with arithmetic groups, the teacher followed much the same plan as was followed with reading groups. However, she did customarily rotate the arithmetic groups for her undivided attention. She tried to work with every arithmetic group every day.

Managing Routine

Problems of managing routine are intensified when intraclass groups are organized. The guidance of a variety of activities progressing at one time taxes the skill of any teacher. Although all six co-operating teachers appeared to handle problems of routine very skillfully, no one had organized her thinking on the subject in a systematic manner. However, the classroom observations indicated techniques for handling routine which were successfully employed. It is possible to ferret out of actual practices some practical procedures. An examination of such procedures would indicate that the successful management of routine when group work was in progress was dependent upon thorough and detailed planning with special attention given to the following factors: (1) the skillful use of pupil leaders, (2) the efficient handling of materials, (3) the way in which assignments are made, (4) a thorough understanding of working techniques, and (5) the establishment of well understood plans for group work.

The use of pupil leaders.—Observations indicated that the training of children to accept responsibility for leadership simplified the problems of management of intraclass group work. This was true on all

three grade levels considered. Many specific examples of children's handling routine matters were observed. Only a few are cited here.

In Class I-1, there were table chairmen who were responsible for the conduct of the children at the tables and group chairmen who were responsible for reading group work or arithmetic group work. One of the responsibilities of group chairmen was to check to see that all required work was completed, to take it up, and to give it to the teacher.

The teacher of Class I-2 gave an interesting example of the way in which children can help care for routine matters. All children in the class understood that only group chairmen could come to her when she was working with a reading group. She stated that she had found it "better to have four children free to come to her than to have thirty children asking her questions." She believed that this technique eliminated much confusion.

The teacher of Class III-1 stated that she never passed out materials of any kind, but that group leaders were held responsible for this work. The teacher of Class III-2 even detailed group leaders to direct word study before silent reading. This plan made it possible for all groups to do this type of reading at the first of the period. Had she found it necessary to do this work herself, it would have been impossible for all groups to be ready for their silent reading at one time.

The reading group leaders in Class V-1 were held responsible for deciding when their groups were to be brought together for planning reports, and the children understood that the final decision as to the nature of the report would rest with the group leader. The children seemed to realize their responsibility for solving their own problems and seldom demanded the teacher's time for trivial matters.

The teacher of Class V-2 reported that groups were encouraged to make decisions without the teacher's help whenever it was possible. Such a practice made it unnecessary for groups to take up the teacher's time with trivial matters.

Making assignments.—All co-operating teachers agreed that group work could not progress smoothly when children did not understand assignments. Many examples of carefully made assignments were noted. The teacher of Class I-1 planned with the children carefully before they attempted to write birthday cards. The children even asked the teacher to write certain words on the board for their use. No work was done on the cards until the teacher was sure the assignment was understood.

The teacher of Class I-1 found it helpful to give instructions for work in the workbooks designed to supplement the basal readers while

the children were in the reading circle. The children went immediately from the groups to their seats to do this work. The teacher believed this plan made the assignment perfectly clear for the reading groups.

The teacher of Class I-2 made it a practice to go from group to group at the first of each period to be certain that the assignments were understood. She never began work with a group until she had done this.

The teacher of Class III-1 made a practice of writing assignments for the day on the chalkboard each morning. She went over these plans with the class the first of the day and also over specific parts of the plans before each work period.

The teacher of Class III-2 had stressed the pupil's responsibility for getting the details of assignments. She stated that she had made a practice of giving all groups written assignments at the first of the term but that she had gradually stopped this practice and put the responsibility upon the children for getting the details of all assignments.

Both fifth-grade teachers put daily plans on the chalkboard. These plans included such details as the names of the children to be in charge of various activities, the names of the groups to make reports, etc.

The handling of instructional materials.—Well-thought out plans for handling instructional materials are essential to successful group work. During the twelve full-day observations not a single occasion was observed when children had to wait for a teacher to get together materials. It is believed that the teachers made a check of materials that would be used before the day's work began.

Many of the problems of handling the instructional materials can be eliminated if children are trained to take proper care of materials. It is essential that all children know where materials are kept and understand the proper use of the available materials.

The teacher of Class I-1 reported that all art media except finger paints were left out at all times. The children were free to use any of them at appropriate times. She had found it highly desirable to give careful instruction in the use of any new media before it was introduced for independent use; for example, she had given the children careful directions for the care of paint brushes and supervised their painting activities several times before these materials were left out for independent use.

The teacher of Class I-2 had it definitely understood by the children that the chairman of the group was to put out all materials and take up all the work.

The teacher of Class III-1 has found it desirable to give the children information about the storage of all materials. The children were free to go to the cabinets at any time, and much of the material was labelled for their convenience.

The teacher of Class V-1 had given each child a special responsibility for putting away materials and seeing that all supplies were in proper order. She pointed out it was easier for children to get out materials than to put them back properly. She had also found labels very helpful.

The teacher of Class -1 had given each child a special responsibility for keeping the room clean. This plan had freed her from having to call children's attention to tasks that should be done.

The teacher of Class V-2 was careful to have the necessary word cards ready for different reading groups at the first of each reading period. The pupils in this class were also trained to keep a very accurate record of their spelling errors. She found that attention to factors such as these made it possible for group work to progress much more smoothly.

Understanding working techniques.—Children cannot work successfully in groups if they do not understand the way that they are to work as well as the task assigned them. Many examples of teachers helping children to understand working techniques were observed. A few examples are given here.

Before reading-group work began in Class I-1, the teacher carefully reviewed with the children the work of the chairman and helped the children enumerate activities they could engage in after assignments were completed.

The children in Class I-2 had been led to understand that no more than two children would be at an easel at one time. The members of a reading group took turns at the easel without any supervision from the teacher, and no confusion resulted from this work. An understanding that it was necessary to take turns made this possible.

The teacher of Class III-1 was observed calling the children's attention to group-work habits at the same time reading assignments were made.

The children in Class III-2 clearly understood the role of the chairman in making decisions in regard to reports. This clear understanding eliminated much friction and petty arguing.

The children in Class V-1 understood that the teacher was available for help at the first of the arithmetic period but that no child was free to go to her when she was working with an arithmetic group. They too

understood that it was possible for them to get help from one another. The children respected these policies.

The teacher of Class V-2 had found it highly desirable for children to have a clear understanding of what activities were possible when specific assignments were completed.

Establishing well-understood plans for group work.—It is helpful to set up a general pattern for group work which teacher and pupils alike understand. Such a framework establishes desirable group-work routine without necessarily resulting in inflexible practices. Examples of such frameworks may be pointed out.

In both first-grade classes the teachers alternated the reading groups for their special attention. Children understood this plan and daily explanations of the way in which the work would progress were unnecessary. In both rooms, the children understood that they would have relatively long work periods and that there was a variety of possible activities.

The children in Class I-1 understood that during the arithmetic period they must engage in activities directly related to numbers whereas they were free to engage in a wide variety of activities after reading assignments were completed. Such understanding made it unnecessary to give repeated explanations.

The children in Class III-1 understood definitely that their reading periods followed a general pattern. First there was individual study followed by group work on reports under the direction of group leaders. The teacher gave no explanation to the groups day after day as to how they would work, but children followed the general plan.

The children in Class III-2 understood that they gave reports on alternate days, and confusion and arguments in regard to the plan of reporting were eliminated.

The children in Class V-1 clearly understood that arithmetic assignments were for one week, that they were required to complete all assignments, and that they were free to engage in other activities only after the assignments were completed. During two days of observations in this room, the teacher was observed to remind only one child of his arithmetic assignment.

During an observation on a day when newspapers were to be read, the children in Class V-2 were observed to begin work with very limited directions because they understood so perfectly the procedure that would be followed.

Meeting Individual Needs Within Intraclass Groups

Since intraclass grouping is basically a technique for meeting individual needs and since any discussion of intraclass grouping is indirectly a discussion of meeting individual needs, this section of the report may appear somewhat incongruous. However. it would seem desirable to call special attention to those factors involved in the successful guidance of group work which are especially basic to meeting individual needs. The factors appear to be the same on all grade levels.

The selection of appropriate group activities is essential to the meeting of individual needs. It would seem significant that twelve full-day observations produced not a single example of two groups in one room working on identical assignments. A wide variety of activities should be provided for any intraclass group. Examples of such activities have previously been given.

Since children in any intraclass group will work at varying rates of speed, it is necessary to provide for these differences. In general, the teachers provided work periods long enough to make it possible for children to work without being rushed and then provided a variety of activities that the children could engage in when specific assignments were completed.

It would appear desirable for the teacher to set aside some time to work with individual children as problems arise. The plan followed by a number of the teachers of not attaching themselves definitely to working groups made it possible to give time to individual children. Periods for individual work are also helpful.

The practice of having children help one another is a technique for meeting individual needs. Examples have previously been pointed out of group leaders who were given suggestions for helping individual children.

Summary

Chapter IX considers factors which are involved in the successful guidance of group work. Any classification of such factors is arbitrary and somewhat inaccurate because all factors are so completely interrelated, but it does serve to clarify the problem of working with intraclass groups and lends organization to the discussion.

Interviews with teachers and observations led to the conclusion that the successful group work which was observed was the result of atten-

tion being given to pupil-teacher planning, the development of the habit of evaluation in the class, well-considered plans for developing leadership and desirable group-work habits, efficient plans for caring for routine, the careful selection of group activities, and utilization of techniques for meeting individual differences within intraclass groups.

CHAPTER X

The Role of Classroom Facilities, Equipment and Instructional Materials

The review of professional literature would indicate that classroom facilities, equipment, and instructional materials can facilitate and stimulate intraclass group work.

During the interviews the six co-operating teachers discussed the role of physical facilities in group work and told of their use of instructional materials. The observations also furnished information regarding the use of physical facilities and instructional materials. Such information is reported in this chapter. Attention is specifically directed to: (1) physical facilities of the classroom, (2) the use of textbooks and workbooks, (3) the contribution of the classroom library to group work, and (4) the use of instructional materials other than textbooks and workbooks.

THE CLASSROOM FACILITIES

The six teachers agreed that the physical features of a classroom can either facilitate or limit intraclass group work. They had found the classrooms and furniture in Casis Elementary School most satisfactory.

Description of the classrooms.—The classrooms in Casis Elementary School* were designed and equipped in harmony with the best professional thinking in the field of school design and equipment and reflect the ideas of many co-operating teachers and administrators.

Only those characteristics of the classrooms which directly influence group work are considered here.

The classrooms in Casis Elementary School were designed to serve the single-teacher-per-grade plan of organization. These rooms are twenty-eight by thirty-six feet with a total area of more than one thousand square feet. Each room has its own work area with sink, running water, gas outlets, storage space, lockers, and drinking fountain. In-

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* These classrooms have been briefly described in the following reference: Henry J. Otto and J. W. Edgar, "Demonstration Center for Elementary Education in Texas Is Joint Project of Public Schools and University," *The Nation's Schools*, XLV (June, 1950), 40–43.

dividual toilet rooms open into all classrooms. Each room has an outside entrance and an adjoining paved area and small garden plot.

All rooms are furnished with tables and chairs, work tables, and library tables. All furniture has a light finish which is easily cleaned and waxed. There are many varied storage areas in each classroom.

Space.—All six co-operating teachers agreed that adequate space was the most important characteristic of the new classrooms. All six teachers had been accustomed to working in much smaller rooms and reported that adequate space definitely facilitated group work.

The teacher of Class I-2 expressed the opinion that you had to have space for groups to get together without interfering with one another. She stated that she had found a larger room eliminated a great deal of tenseness and confusion in the classroom and made group work much more efficient. She made the very practical suggestion that it was well to arrange a room in such a way that reading groups could be taken away from storage and work areas. She stated that such an arrangement was possible in a large room. The teacher of Class V-1 gave a specifc example of the type of difficulty that arises in a small room. She said that she had always found it difficult for a group to practice a dramatization in a small room where other children were reading and that she had not had this trouble since she had been working in Casis School because of the size of the room and the paved area adjoining it.

The opinions which have been quoted were in harmony with the thinking of all other teachers.

It would seem significant that the teachers of Class I-2 and Class V-2 both made frequent use of vacant rooms adjoining their rooms. In spite of the large classrooms and the outdoor work area, these teachers enjoyed the additional space that these vacant rooms afforded. One of the teachers rather jokingly stated that it was just impossible to have too much space.

Storage space.—All of the teachers had found the built-in cabinets with a variety of types of storage space most convenient. Such storage space has a direct relationship to group work. A variety of instructional materials stimulates group work, and such materials cannot be efficiently and adequately cared for without storage space.

The six teachers were most enthusiastic about the storage space in their classrooms. Their discussions pointed to several important factors. First, all materials should be stored where they are available to the children. One teacher told of the irritation she had personally ex-

perienced in a classroom where it had been necessary for her to store tempera paints on a high shelf. She said that many times she had had to stop other work to get paint which children needed. Second, children should understand where all materials that they are to use are stored. Three of the co-operating teachers mentioned the desirability of using labels on storage areas. Third, children should be taught to assume responsibility for the proper care of well organized storage space.

Paved area and outside entrance.—All six teachers stated that they found the paved areas outside their rooms most practical. They unanimously reported these areas were used for group activities, especially for practicing dramatizations, using finger paints, working with clay, and reading orally in small groups.

The classroom observations confirmed the statements made by the teachers. Groups were observed using the paved areas in four of the six classrooms. Children were observed using these areas for dramatizations, reading in small groups, working on properties for dramatizations, and gardening. On all occasions such work progressed without any disturbance to the children working in the classrooms.

Furniture.—The interviews with the teachers would seem to justify the statement that classroom furniture should have at least two characteristics. The furniture should be movable, and it should be easily kept. The teachers agreed that flexible use of furniture was essential to successful group work. One teacher asked the very simple question, "How can children do group work if they can't get together?" and added that some furniture made it very difficult for children to get together. It was common practice in all classrooms for children to move chairs and tables about frequently.

The teachers reported finding the library tables most desirable. They also reported that it was desirable to have some table space in the room that was not used as a regular seating space for pupils. Such tables had been found to be very useful for group work.

Running water.—The teachers agreed that running water in the room facilitated group work. The running water made it possible to carry on activities such as finger painting and working with clay that are extremely difficult in rooms without water. Certainly such activities can be carried on with a minimum loss of time when water is readily available.

The Use of Textbooks and Workbooks

The observations and interviews revealed efficient use of textbooks and workbooks designed to meet the range of instructional needs of intraclass groups. Each of the teachers was accustomed to selecting textbooks and workbooks for specific intraclass groups rather than for the class as a whole.

General principles.—All six teachers were using textbooks on several grade levels. They reported that such a plan was essential if the reading needs of children were to be met. The teachers agreed that they wanted textbooks on various levels to be available to them and that they did not think it was necessary to have copies of any one text for all the children in a class. They believed that textbooks in groups of six to ten were adequate.

These teachers also agreed that it was not desirable to have copies of any given workbook for all the children in a class. All of the teachers regularly used a number of different reading workbooks and a number of different arithmetic workbooks with their classes.

The use made of textbooks and workbooks.—The textbooks and workbooks which were being used in May, 1951, in the six classrooms are listed below:

Class I-1

Reading

Textbooks

Group 1—First- and second-grade readers.
Group 2—First-grade readers.
Group 3—Easiest first-grade readers.
Grade 4—Primers.

Workbooks

Workbooks designed to accompany basal readers with Groups 3 and 4.

Arithmetic

Workbooks

Group 1—Second-grade workbook.
Group 2—First-grade workbook.
Group 3—Very easy first-grade workbook.

Class I-2

Reading

Textbooks

Group 1—Second-grade readers.
Group 2—First-grade readers.
Group 3—Easiest first-grade readers.
Group 4—Primers.

Workbooks

Workbooks designed to accompany basal readers used with Groups 3 and 4.

Arithmetic

Workbooks

Group 1—Second-grade workbook.
Groups 1, 2, 3—First-grade workbook, different portions.

Class III-1

Reading

Textbooks

Groups 1, 2—Third- and fourth-grade readers.
Groups 3, 4—Third-grade readers.
Group 5—Second- and third-grade readers.
Group 6—Second-grade readers.

Workbooks

None being used in May, 1951.

Arithmetic

No arithmetic groups.

Class III-2

Reading

Textbooks

Group 1—Fourth-grade readers.
Groups 2, 3—Third-grade readers.
Group 4—Second- and easy third-grade readers.
Group 5—First- and second-grade readers.

Workbooks

None being used in May, 1951.

Arithmetic

Workbooks

Group 1—Fourth-grade workbook.
Group 2—Third-grade workbook.
Group 3—Second-grade workbook.

Class V-1

Reading

Textbooks

Third grade through seventh grade readers. (The exact use of books by groups varied from time to time and made it difficult to assign definite levels of readers to the groups.)

Workbooks

None being used in May, 1951.

Arithmetic

Workbooks

Workbooks for grades three, four, five.

Class V-2

Reading

Textbooks

Group 1—Sixth-grade readers.
Group 2—Fifth-grade readers.
Group 3—Fourth-grade readers.

Workbooks

None being used in May, 1951.

Arithmetic

Workbooks

Group 1—Sixth-grade workbook.
Group 2—Fifth-grade workbook } different portions.
Group 3—Fifth-grade workbook }

The above tabulation may not give a completely accurate picture of actual practices. Both first-grade teachers, for example, had children in their rooms who were doing some reading in pre-primers although their reading groups were reading most of the time in primers. The teacher of Class I-2 told of two children in her class who were actually reading fourth-grade readers part of the time. The books listed above are those that were being used for basal reading instruction, and the actual range of reading materials in the classrooms was greater than that indicated by the tabulations. Several explanations should be made about the use of workbooks. In both Classrooms I-1 and I-2, Groups 1 and 2 had completed the use of some workbooks but were not using them in May of 1951. For example, Group 1 in Class I-1 had completed a pre-primer workbook, skipped the primer workbook, and completed

a first-reader workbook. Group 2 had completed workbooks on the pre-primer, primer, and first-reader level.

The teacher of Class III-1 reported that she customarily used reading workbooks for those children who were needing special help and that she was not enthusiastic about the use of workbooks for the entire class. Earlier she had used seven phonetic workbooks on the first-grade level, five phonetic workbooks on the second-grade level, seven basal-reader workbooks on the first-grade level, and five basal-reader workbooks on the second-grade level. These books had been given to twelve different children who were deficient in reading.

The teacher of Class III-2 did not care to use reading workbooks except for one or possibly two reading groups a year.

The Classroom Library

The interviews and the classroom observations would lead to the conclusion that the six classroom libraries were contributing substantially to the quality of the group work in progress in the classrooms. The classroom library made it possible to meet individual needs by providing reading material to meet a variety of interests and abilities. The classroom library was also being used to take care of the range in the amount of time different children required to complete assigned tasks. In all six situations the children understood that they were free to use library materials when assigned tasks were completed. The classroom library both stimulated and facilitated group work. Groups were frequently able to solve their problems through library reading, and such reading in turn presented new problems which led to group activities.

The teachers agreed that any classroom library should have books varying widely in reading difficulty and interest. In the first-grade classroom libraries, trade books and odd copies of textbooks were used most frequently. In the third- and fifth-grade classroom libraries encylopedias, dictionaries, and vertical file materials were also used.

Observations showed that the six classroom libraries were being intensely used by children.

Instructional Materials

The teachers agreed that a variety of instructional materials played an important role in group work. Classroom observations gave valuable information about the materials that were actually in use in these class-

rooms. The teachers contributed additional significant information regarding instructional materials.

The use of materials observed.—The classroom observations indicated that a variety of instructional materials were being used in these classrooms. A list of the materials that were in actual use in these classrooms should seem to be especially meaningful when linked with the use that was being made of the materials. Below are listed the instructional materials and their uses that were observed:

First Grade

Instructional Material	Use of Materials
Games and dolls brought to school by children	Enjoyed by some children after assigned work was done
Newsprint, 18″ x 12″	Used for dictionary pages and tempera painting
Newsprint 9″ x 12″	Used for drawing, planning murals, illustrating stories
Construction paper, white	Used for birthday cards and drawings for "picture show"
Crayolas and tempera paints	Used for drawing, making birthday cards, dictionary pages, and illustrating stories
Stencils, number	Used by some children after assigned work was done
Number cards, combinations and group recognition	Used by arithmetic groups for playing number games (assigned activity) and by individuals after assigned work was done
Counting objects, varied	Used by individuals after assigned work was done
Writing paper, wide lines, and large pencils	Used for writing letters and copying arithmetic problems
Workbooks, arithmetic and reading	Used for assigned group work
Wrapping paper	Used for "picture show" roll
Worksheets, arithmetic and reading	Used for assigned group work

Third Grade

Instructional Material	Use of Materials
Newsprint, 18″ x 24″	Used for illustrating stories and drawing for pleasure
Tempera paints and crayola	Used for drawing, illustrating stories, making properties for a dramatization
Writing paper, wide lines, and pencils	Used for making reading reports, working arithmetic
Mechanical toys	Enjoyed after assigned work was done
Rock collection	Enjoyed after assigned work was done
Sandpaper, shellac, wood scraps, wood burning tools, finger paint and paper, tempera paint and paper, crayolas and construction paper	Used during the activity period by groups
Cardboard	Used for making properties for a play
Weekly Readers, old copies	Used for self-testing
Worksheets, arithmetic and reading	Used for assigned group work
Workbook, arithmetic	Used for assigned group work

Fifth Grade

List of words, on large sheets of newsprint	Used by group chairmen in directing work study
Worksheets, arithmetic and reading	Used for assigned group work
Workbooks, arithmetic	Used for assigned group work
Writing paper and pencils	Used for assigned tasks
"Prove-it Envelopes" with arithmetic flash cards	Used after assigned work was done
Tempera paint and crayolas	Used for illustrating stories and preparing properties for a play
Newsprint, 18″ x 24″	Used for illustrations
Tag board	Used for properties

The use of other instructional materials.—The six teachers reported the use of some materials that are not indicated above. The following instructional materials were specifically named: clay, finger paint, water colors, and commercial and teacher-made games.

The teachers were generally satisfied with the materials that had been made available to them. The first-grade teachrs indicated that they would like more concrete teaching aids for arithmetic, and the teacher of Class V-2 indicated that she would like to have more wood-working tools and some tools for leather work.

SUMMARY

Chapter X considers the role of classroom facilities, equipment, and instructional materials. Interviews and observations pointed to the fact that group work is facilitated and stimulated by physical facilities and instructional materials.

The teachers agreed that large classrooms, outdoor work areas, running water, and varied storage space facilitated group work. However, they pointed out that a resourceful teacher can do much to overcome limitations of physical facilities. The teachers also agreed that varied materials stimulated group work, and observations substantiated their opinion. The classroom library was especially valuable in this respect.

Special attention was given to the use being made of textbooks and workbooks. No teacher limited her use of these books to those prepared specifically for the grade level she was teaching. All teachers used textbooks prepared for a range in grade levels and did not care to have more than six to ten copies of any textbook.

Chapter XI

Major Findings and Implications

The present study is concerned with the organization and guidance of intraclass groups in the elementary school. It is exploratory in nature, and no attempt is made to derive any final answers. The study falls into two parts. Part I is a review of pertinent literature, and Part II is an analysis of intraclass grouping practices in two first-grade, two third-grade, and two fifth-grade classrooms in Casis Elementary School, Austin, Texas, in May, 1951.

Three aspects of the problem are considered: (1) the relationship of the structure of the class to the organization of the intraclass groups, (2) the organization and guidance of intraclass groups, and (3) the role of instructional materials, equipment, and classroom facilities in group work. Throughout the study emphasis is placed upon implications for instruction in arithmetic, reading and social studies.

The intensive study of grouping practices in the selected classrooms is based upon (1) study of available cumulative records, (2) interviews with the teachers, (3) observations in the classrooms, and (4) sociometric tests.

Major Findings

The major findings of the study may be classified according to sources of information: (1) literature, (2) statistics, (3) sociometric tests, and (4) interviews and observations.

Literature.—Pertinent literature points to the importance of intraclass grouping as a technique for meeting individual needs. The literature indicates that intraclass grouping helps to meet the individual needs of children in two major ways: (1) It results in more efficient instruction because it brings together groups that are smaller and more homogeneous in terms of instructional needs than the class group. (2) It results in children's developing skill in democratic action and realizing desirable social growth because it places children in small groups where they are able to function more effectively socially than in the larger class group.

The literature carries many recommendations for the use of intraclass grouping for instruction in arithmetic, reading, and social studies.

However, the literature does more to establish a philosophy for intraclass grouping than to give information about how the technique may be used in the elementary school.

Statistical Information.—The cumulative records yielded information about the structure of the six class groups and the intraclass groups which had been organized. The results of the California Test of Mental Maturity, the Metropolitan Readiness Tests, and the Metropolitan Achievement Tests gave measures of ability and achievement for the groups. Children on all three grade levels had taken the Metropolitan Achievement Tests. Children in the third- and fifth-grade classes had taken the California Test of Mental Maturity, and children in the first-grade classes had been given the Metropolitan Readiness Tests. The results of the intelligence and achievement tests are summarized in Table XX. Results of intelligence and achievement tests were presented by grade levels in order to give the information in as condensed a form as possible and to present the information for as large a group as possible. Such a plan seemed feasible since the class groups on any grade level did not represent any form of homogeneous grouping.

The information in Table XX reveals a number of significant facts. The first-, third-, and fifth-grade groups represented three definite and progressive levels in terms of average chronological, mental, and achievement ages. The differences were greater in terms of achievement and mental ages than in terms of chronological ages. The difference of 40.5 months in average achievement age between the third- and

TABLE XX

The Distribution of Chronological, Mental, and Average Achievement Ages, All Classes
Ages in Months, May, 1951

	Number of Pupils	Chronological Ages	Total Mental Ages as Measured by the California Test of Mental Maturity	Average Achievement Ages as Measured by the Metropolitan Achievement Tests
First Grade	62			
Average		84.6	*	89.7
Range		79–92	....	77–110
Third Grade	64			
Average		104.9	117.1	111.3
Range		96–119	87–142	92–137
Fifth Grade	66			
Average		130.0	149.6	151.8
Range		119–153	114–191	105–187

*The children in the first grade had not been given intelligence tests, but the Metropolitan Readiness Tests had been given in October, 1950, to these children. The average percentile rank for total readiness for all first grade children was 75.3 with a range from 12 to 99.

fifth-grade levels was the greatest difference recorded. There was a difference of 21.6 months in the average achievement levels of the first- and third-grade children. The table also clearly shows the overlappings in mental and achievement ages between grade levels and wide ranges in mental and achievement ages at each grade. One child in the first grade had a recorded achievement age five months higher than an achievement age recorded for a child in the fifth grade. Another example is the recorded mental age of 142 months for one third-grade child as against a recorded mental age of 114 months for one fifth-grade child. The ranges in achievement and ability were great at each grade level, but they became progressively greater as the grade level increased. The widest ranges in age equivalents were seventy-seven months in mental age and eighty-two months in average achievement age in the fifth grade. Other ranges were fifty-five months in mental age and forty-five months in average achievement age in the third grade and thirty-three months in average achievement age in the first grade.

The results of the ability and achievement tests for the intraclass groups which had been organized were recorded in this study. The large number of intraclass groups made it impractical to present such information in a table. However the information which has been reported in detail clearly indicates these facts: (1) In each class, intraclass groups organized for instruction in a specific area represented progressive levels of average achievement and achievement in the specific areas. (2) Such groups represented different levels in ability, and the differences were usually progressive, especially in the fifth grade. (3) Each intraclass group represented a wide range in both ability and achievement. (4) These ranges were narrowest on the first-grade level and widest on the fifth-grade level. (5) In all groupings in each class there were marked overlappings in the recorded age equivalents for the groups.

Sociometric information.—The results of the sociometric tests given Classes III-1, III-2, V-1 and V-2 are presented in Table XXI. The table gives information about isolates, stars, mutual choices, and distribution of choices. Information was presented in terms of the per cent of the class or per cent of all choices in order to have a basis for comparing the social relations pictured in the different classes. The information in this table shows wide variations in social relations in all classes and differences in social relations patterns in the four classes. The information vividly points to the complexity of social relations with which the teacher must work as she organizes and guides intraclass groups.

TABLE XXI

Indices of Social Relations, Classes III-1, III-2, V-1, V-2

Indices	Class III-1	III-2	V-1	V-2
Isolates, per cent of class				
On the basis of choices for three intraclass groupings	6.3	3.1	0	11.8
On basis of choices for any two intraclass groupings	3.1	3.1	9.4	2.9
On basis of choices for any one intraclass grouping	18.8	15.6	21.9	11.8
Stars, per cent of class				
On basis of choices for three intraclass groupings	3.1	0	0	0
On basis of choices for any two intraclass groupings	6.3	3.1	3.1	8.8
On basis of choices for any one intraclass grouping	15.6	9.4	9.4	8.8
Mutual choices, per cent of choices				
For all three intraclass groupings	25.8	32.1	17.0	27.1
For arithmetic groups				
Children in same arithmetic group	*	21.5	6.7	16.2
Children in different arithmetic groups	*	12.9	8.9	8.1
Total	23.7	34.4	15.6	24.2
For reading groups				
Children in same reading group	8.6	8.6	11.1	21.6
Children in different reading groups	25.8	32.3	13.3	9.8
Total	34.4	40.9	24.4	31.4
For social studies groups				
Children in same social studies group	6.5	8.6	*	*
Children in different social studies groups	12.9	12.9	*	*
Total	19.4	21.5	11.1	25.5
Distribution of choices, per cent of class				
For all intraclass groups				
Receiving no choices	6.3	3.1	0	11.8
Receiving 1–5 choices	34.4	28.1	34.4	26.5
Receiving 6–10 choices	28.1	34.4	31.3	23.5
Receiving 11–15 choices	15.6	21.9	21.9	20.6
Receiving 16–20 choices	6.3	12.5	9.4	8.8
Receiving more than 20 choices	9.4	0	3.1	8.8
For arithmetic groups				
Receiving no choices	18.8	12.5	12.5	14.7
Receiving 1–2 choices	43.8	31.3	40.6	35.3
Receiving 3–4 choices	12.5	37.5	25.0	20.6
Receiving 5–6 choices	12.5	12.5	12.5	23.5
Receiving more than 6 choices	12.5	6.3	9.4	5.9
For reading groups				
Receiving no choices	15.6	9.4	15.6	14.7
Receiving 1–2 choices	50.0	43.8	31.3	35.3
Receiving 3–4 choices	15.6	18.8	25.0	20.6
Receiving 5–6 choices	3.1	25.0	25.0	20.6
Receiving more than 6 choices	15.6	3.1	3.1	8.8
For social studies groups				
Receiving no choices	9.4	9.4	12.5	23.5
Receiving 1–2 choices	43.8	34.4	37.5	26.5
Receiving 3–4 choices	25.0	37.5	25.0	20.6
Receiving 5–6 choices	12.5	12.5	21.9	17.6
Receiving more than 6 choices	9.4	6.3	3.1	11.8

*No grouping for this purpose in class.

The information in Table XXI raises questions about the social relations pictured which cannot be answered, for there are no techniques available to use in evaluating the social relations in a class. Specific examples of the types of questions which might be asked are cited here. Not a child in Class V-1 failed to be chosen at least one time for one type of group work, but 11.8 per cent of the children in Class V-2 were isolates on the basis of all three sets of choices. What are the implications of this difference? The per cent of all choices for group associates that were mutual choices ranged from 17.0 per cent for Class V-1 to 32.1 per cent for Class III-2. Which per cent of mutual choices indicates a more wholesome social climate for group work? An examination of the distribution of choices for all intraclass groups reveals distributions that markedly deviate from the normal curve of distribution. Are such differences in distribution to be expected? Which of the four distributions is most desirable?

Interview and observational information.—All six co-operating teachers used intraclass grouping as a technique for meeting individual needs. All six teachers grouped children for instruction in reading, and the first- and third-grade teachers so completely fused instruction in reading and social studies that their groupings for reading instruction were also considered groupings for social studies instruction. The two fifth-grade teachers had not organized semipermanent intraclass groups for instruction in social studies, but they did group children frequently on the basis of interests as work progressed in social studies. All teachers except the teacher of Class III-1 had grouped children for arithmetic instruction.

All semipermanent intraclass groupings were considered basically achievement groupings. Results of objective tests were utilized by all teachers as they organized the intraclass groups. On the other hand all six teachers emphasized the fact that factors other than ability and achievement had been considered as children were placed in groups, and they gave many interesting examples of children whose group placements were largely determined by factors other than achievement or ability.

Observations led to the conclusion that group work was progressing on a very high level in all six classrooms. Consistently the children appeared to work with interest and pleasure in the intraclass groups. It was the subjective judgment of the observer that all class groups had developed excellent group-work habits.

Observations and interviews with teachers yielded significant information about how the teachers worked with the intraclass groups that had been organized. Such information is very briefly summarized in the following general statements:

1. All teachers stated that setting standards and evaluating work was an important part of the guidance of group work. In general they agreed that this was the very beginning of all successful group work. Observations revealed many examples of children on all grade levels setting standards and evaluating work.
2. All teachers had evolved definite plans for helping children develop desirable group-work habits. Their plans for developing desirable group-work habits were inseparably linked with plans for setting standards and for developing pupil leadership.
3. Careful planning for group work by pupils and teachers appeared to contribute much to the success of group work in all six classrooms.
4. The teachers were very careful to give consideration to the problem of training for leadership in group work. All six teachers used group leaders and rotated the roles of leadership from week to week. All classes understood the responsibilities of group leaders and the responsibilities of group members to the leaders. The teachers frequently used the technique of individual conferences with group leaders to prepare them for roles of leadership.
5. Maintaining a balance of work as individuals, in small groups, and as a class group appeared to give the classes unity that might have been sacrificed with too much emphasis upon small-group work. A balance of work as individuals and as a group was maintained even while intraclass groups were functioning as units, especially in the first grade. Group reports to the classes also appeared to give unity to the classes.
6. A wide range in group activities was observed in all classrooms. In all situations children were given definite assignments which they were expected to complete as they worked in groups and were allowd to choose activities after the assigned work was completed. Providing a rich variety of activities to choose from appeared to be important in the successful guidance of intraclass groups.
7. The teachers used two general plans for relating themselves to several groups working at one time. One plan was to rotate the groups for the major attention of the teacher while other groups worked more or less independently under pupil leadership. The other plan was to have all groups working under pupil leadership which had been carefully prepared and to free the teacher to work with any groups or any individuals in any way she considered best. The first plan was generally used in the first-grade classrooms, but both plans were in successful operation in the third- and fifth-grade classrooms.
8. Well-trained group leaders, well-stored materials, and well-understood plans for group work facilitated the management of routine in all classrooms.

9. All intraclass grouping is basically a technique for meeting individual needs and not a technique for bringing about homogeneity within intraclass groups. The six co-operating teachers appreciated this fact and did plan for the differences within the intraclass groups.

The six teachers discussed the role of physical facilities in group work and told of their use of instructional materials. The teachers agreed that the following factors facilitate group work: (1) large classrooms, (2) outside entrances to the classrooms and outdoor work areas close to the classrooms, (3) a great deal of varied storage space, (4) running water in the classrooms, and (5) furniture that could be easily cared for and moved about. The teachers also agreed that varied materials stimulated and facilitated group work. The classroom library was especially valuable in this respect. No teacher limited her use of textbooks and workbooks to those prepared specifically for the grade level she was teaching. All teachers used textbooks prepared for a range in grade levels and did not care to have more than six to ten copies of any textbooks.

Overview of the Total Problem of Intraclass Grouping

Intraclass grouping proposes to bring together small groups of children who are sufficiently alike to profit from mutual experiences. Such grouping may result (1) in more efficient instruction because it brings together groups that are smaller and more homogeneous in terms of instructional needs than the larger class group and (2) in valuable experiences in democratic group living because it places children in small groups where they are able to function more effectively socially than in the class group.

Bases for intraclass grouping.—The present study points to the importance of giving consideration to a complex of factors as a base for intraclass grouping. Factors which should be given special consideration are (1) ability, (2) achievement, (3) working relationships between different children, (4) personality dependencies and clashes, (5) balance of factors such as sex and minority group membership, and (6) social and emotional needs of individual children. The two most valuable sources of such information are cumulative records and observations.

All groupings should be kept flexible and should probably be for specific purposes. Multiple groupings in any classroom help to give children varied group experiences, to bring about an understanding

of the purposes of grouping on the part of the class, and to keep groupings from becoming inflexible. All grouping should be done in the light of all that is known about the complex structure of the class group.

The structure of intraclass groups.—Intraclass grouping never results in groups that are homogeneous but may result in groups that are less heterogeneous in terms of specific characteristics than the class as a whole. All intraclass groups show ranges in ability and achievement as measured by standardized tests, and observations and sociometric tests indicate a wide range of social relations within all intraclass groups. Regardless of the plan followed for the organization of intraclass groups, the teacher is still faced with the problem of meeting individual needs within the groups.

There is no available evidence upon the basis of which judgment can be passed as to the range in ability and achievement that is most desirable in intraclass groups in any one of the three subject areas considered. One does not know how a wide range in ability and achievement in an intraclass group influences the behavior and achievement of members of the group.

Working with intraclass groups.—The successful guidance of intraclass groups depends upon a complex of factors. Any classification of such factors is arbitrary and somewhat inaccurate because all of the factors are completely interrelated and can not be clearly distinguished from one another. However certain factors stand out as being of special importance.

Probably all group work should begin with leading children to set standards for group work. It is essential that the children understand how they are to work together as well as to understand what tasks are assigned. Children cannot be expected to understand and respect standards which they do not help to formulate. After standards for group work are set, children should be led into the habit of evaluating their group work in terms of these standards. Such practice results in children's development of skill in working together.

Although setting standards is an integral part of pupil-teacher planning, there are other aspects of such planning. Pupil-teacher planning contributes to successful group work in the following ways: (1) It gives the children an understanding of just what work is to be done and just how the groups are to work together. (2) It leads children to recognize the importance of the work to be done and to take a personal

interest in tasks which they accept as their own. (3) It gives children an opportunity to function as a group under the guidance of the teacher. Group work is hardly possible in situations where pupils and teachers are not accustomed to planning together.

Children obviously need guidance in learning to work together, for it is no simple task for a young child to become a successful group member. Of course, the problem of helping children develop good group-work habits is closely related to the problems of developing pupil leadership, and the two problems should be considered together. It is possible to make certain general statements which suggest ways in which teachers can help children develop leadership qualities and good work habits:

1. Children are quick to sense the teacher's respect for their rights, responsibilities, and contributions, and in turn reflect the same attitudes in their relationship with others.
2. It is just as essential to train children to be followers as to train them to be leaders. Children should alternate in these roles.
3. Group work is dependent upon the selection of appropriate tasks. Tasks selected for small groups should be within the interests and capacities of the children.
4. The responsibilities which children are given for the direction of group work should be carefully matched with their ability to assume the responsibilities.
5. Children should understand the way they are to work as well as the work that is to be done.
6. In general, the more immature a group is the more direct guidance the teacher must give the group and the shorter the work periods should be.
7. The appointment of group leaders with well-understood duties for stated periods of time helps to develop leadership.
8. Group leaders have to be trained for their positions. The use of individual conferences with leaders is a valuable technique for training leadership.

The teacher should strive to maintain a balance of work as individuals, in small groups, and as a class unit. Valuable experiences can be gained from all three types of work, and one type should never overbalance the others.

Thorough and detailed planning for all group work by the teacher facilitates the management of routine in the guidance of group work. The following factors should be given consideration as the teacher plans her intraclass group activities:

1. What is the best possible assignment of work areas?
2. What responsibility can the children assume for the care of materials and equipment?
3. How can these responsibilities be made clear and important to them?
4. When and how should assignments be made?
5. What is the best possible length of periods for group work?
6. What restrictions should be put upon the activities of children as they work in groups?
7. How can children learn to appreciate the need for such restrictions?
8. What duties should group leaders assume?
9. How should the teacher relate herself to several groups working at one time?

The teacher certainly cannot find definite answers to any of these or similar problems. However she should develop clear and definite possible solutions to them which she should try out on an experimental basis. The evolution of techniques for meeting problems of managing routine in working with intraclass groups demands continuous evaluation and refinement of plans.

If groups are to work successfully a variety of activities must be provided. These activities must be within the range of interests and capacities of the children. A practical technique is the plan which provides for two types of activities for most working groups, activities which are required of all group members and a variety of activities from which to choose when the assigned work is complete; for example, all members of a group might be required to do certain work outlined in the workbook accompanying their basal reader and then be permitted to choose from such activities as recreational reading, painting, or playing quiet games.

Classroom facilities, flexible equipment, and a variety of instructional materials both stimulate and facilitate group work. However, resourcefulness and imagination can do much to overcome limitations of physical facilities. The goal of the most flexible use possible of the facilities which are available should be kept constantly in mind. The most efficient use of materials and equipment calls for continuous teacher-teacher and teacher-pupil planning in a school. Special consideration should be given to the use of textbooks and workbooks. The practice of giving all children in a class the same text or workbook cannot be justified and certainly does not stimulate the best type of group work. There is also no justification for limiting the use of textbooks and workbooks to the grade level for which they are primarily published.

Implications for Further Research

The present study points to need for further research on the problems of intraclass grouping:

1. More research is needed to bring into clearer focus the relationship of the structure of the class group to desirable practices in organizing intraclass groups.
2. Research is needed to help answer questions such as the following which arise as the teacher organizes intraclass groups:
   a. How many groups should be organized?
   b. What specific bases for grouping should be adopted?
   c. What degree of homogeneity in intraclass groups is desirable?
   d. In terms of what factors should groups be relatively homogeneous?
   e. How does the problem of organizing intraclass groups vary with the grade level considered?
3. Research is needed to help answer questions such as the following which arise as the teacher works with intraclass groups:
   a. What levels of efficiency in group work is it reasonable to expect of children of different ages?
   b. What are appropriate group tasks for children of different ages?
   c. What is the most desirable balance of work as individuals, in small groups, and in class groups?
   d. What is the best length of time for group-work periods on the different grade levels?
   e. What are the most desirable ways in which a teacher can relate herself to several groups working simultaneously in different types of groupings and on different grade levels?
   f. What materials and equipment are most valuable in stimulating group work?
4. More research is needed to give the teacher badly-needed tools for evaluating her organization of intraclass groups and her guidance of group work. Research is especially needed in the field of sociometrics, for the teacher has a tool in the sociometric test which gives her a valuable picture of the social relations in her class, but she has no techniques for determining whether the social relations which she finds are good or bad.

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